

The Use of a Multivariate Organizational Behavior Model in
Describing Individual, Group, and Intergroup Behavior:
A Comparison of Three Manufacturing Firms

By

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THE USE OF A MULTIVARIATE ORGANIZATIONAL BEHAVIOR MODEL IN
DESCRIBING INDIVIDUAL, GROUP, AND INTERGROUP BEHAVIOR:
A COMPARISON OF THREE MANUFACTURING FIRMS

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The primary objective of this study is to describe and analyze the behavioral patterns that exist in organizations in terms of the influencing forces of structural and leadership variables. A secondary purpose of this study is to employ a new multivariate "systems" model that purports to identify certain variables that explain human behavior within an organization and to assess the operational feasibility of the model in empirical research.

A field study was conducted which included three manufacturing plants of the same corporation but geographically dispersed within the southeastern part of the United States. All the salaried personnel in each of the three plants were included in the study. Data concerning the structural, leadership, and behavioral factors existing within the plants were gathered from personal interviews, observation, and the use of self-completed questionnaires. Each of the plants was described in terms of the variables comprising the model. Contrasts in the behavioral patterns which emerged among the plants were analyzed from the standpoint of the factors which caused the behavior.

Several general conclusions can be reached from the results of this research. The analyses of the behavioral patterns evidenced in the three plants and the variables which influenced their development were found to be almost entirely in keeping with the available research literature. This exploratory study did not utilize statistical techniques in assessing the validity of the model. The basic assumptions and the initial conceptualization underlying the model were assumed as given and are still to be proven by subsequent research. The model did provide an easy means to collect data in the very complex area of organizational behavior. The necessity to clearly define and specify the units under study when employing the model was probably the single most important result of the study regarding its operational feasibility.

CHAPTER I

INTRODUCTION

Consultants and university professors of management have been asked many times by practicing managers: "How do we motivate our employees?"; "Why do our employees behave the way they do?"; "What can we do to change our organizational structure and environment to allow for the increased realization of individual and company goals?" Students of organizational behavior realize that initially the answers to all these and other similar questions are based upon rather limited and, in many instances, tenuous knowledge and information. The gains that are to be made in specifically answering these questions will have to be rooted in an increased body of empirical research and not on mere speculation.

This exploratory study then is concerned with the use of a multivariate behavioral model in explaining behavior within an organization based upon data collected in three field studies.

Objectives of the Study

Organizations continually facing the need to change because of a rapidly accelerating technology and social-political-economic pressures, find themselves in the unenviable position of accommodating all these external and internal pressures. Modification of what presently exists and/or development of new and unique approaches requires a thorough understanding of what exists now. It is important for firms consciously to be aware of their existing organization system--the structure and management styles. Whatever system the firm elects to follow, it must

be integrated and consistent throughout the organization. For example, a company that selects and engages in management development training, that emphasizes democratic, participative leadership styles and then requires its management to operate in an organizational environment hostile to this mode is asking for ineffectiveness, inefficiencies, frustration, turnover and, in general, unfavorable attitudes and behavior from all its employees.

The primary objective of this study is to describe and analyze the behavioral patterns that exist in three organizations in terms of the influencing forces of structural and leadership variables. The emphasis will be directed toward the analyses of the contrasts between the three plants in the study and not on the contrasts within each plant.

There seems to be no easy way to obtain an overall understanding of the multiple influences that exert pressures on behavior in organizations. But, if we are to gain further insight into organization behavior we must understand the influence that a single variable plays alone, and then by pursuing one by one the influencing forces exerted by a multitude of variables we can hope to obtain a unified understanding of the entire organization. This understanding can best be accomplished by the use of a model that represents an organizational system and functions to integrate data about the system's behavior in such a way as to provide information about characteristics of that behavior. The model that will be employed in this study is the Melcher Organizational Behavior Model developed by Professor Arlyn J. Melcher of Kent State University, Kent, Ohio.¹

¹Chapter II will fully present the Melcher Model that will be utilized in this study.

The aim of this exploratory study is on a broad investigation and understanding of behavior that is possibly influenced by a multitude of factors existing within the organizations. This study is not concerned with investigating a few or even a dozen variables that are determinants of behavior, but rather in exploring the possibility of numerous factors which may be influencing behavior. For this reason the new "systems" model developed by Dr. Melcher best meets the objective of this study over other existing organizational behavior models which lack multivariate measurement capacity important for this exploratory study. The variables of the Melcher model have been identified by many researchers and theorists in organizational behavior. The model attempts to integrate these efforts as the basis for systematically describing and analyzing the determinants of behavior and the contrasts that exist.

A secondary objective of this study then is to employ a new multivariate "systems" model that purports to identify certain variables that explain human behavior within the organization. The underlying emphasis of the model is upon cause and effect relationships in explaining the determinants of behavior. If one is able to identify and explain the causes of behavior, he then is in a position to develop plans and actions to change or modify dysfunctional behavior or to further strengthen functional behavior in the organization. There is a clear advantage in knowing what presently exists in an organization prior to any attempts at modifying or influencing behavior.

Because of the present stage of refinement in organization behavior studies, the cause and effect relationships are largely dealt with on qualitative, rather than quantitative bases. Nevertheless, analyses

does provide information as to the direction of influence certain variables exert over behavior. Further, the body of substantive theory that accounts for and predicts human behavior within the organizational context is in its infancy. Although numerous research studies that focus upon a limited number of factors influencing behavior are available, they tend to be narrow in their approach. The resulting fractionation of the diverse perspectives used in organizational research has produced analytical difficulties when attempting to integrate a number of the research studies into a multivariate approach in a study of organizational behavior. It is hoped this research study will aid in developing the body of organizational behavior theory and in enhancing the validity of the research findings that now exist.

Present organizational behavior theory provides us with numerous generalizations of the way in which certain variables affect behavior. These broad generalizations are commonly accepted by students and practicing managers. It is hoped that this exploratory study will challenge some of these generalizations, provide further insight into the limitations and qualifications to some of the theories, support others, and raise some important questions that need to be pursued by others in subsequent studies.

Scope of the Study

Three process type manufacturing plants, geographically dispersed, were studied. All three plants are a part of the same corporation. The identity of the corporation granting acceptance for the research study whereby the model could be used is not important to the results of this research. Therefore, to preserve anonymity, the names of the three plants, plant managers, supervisors, foremen, and other salaried

individuals have been concealed. Otherwise all data are based completely on the actual situation.

In each plant all of the salaried personnel, which comprise the management of the plants, were included in the study. In a relatively few instances several persons were not directly responsible for the supervision of subordinates. They did provide necessary information and were included in the sample size of the study. By including all salaried personnel, a better profile of the behavioral patterns and the leadership dimensions that exist in the plants was possible than would have been the case if a more selective basis were used. Therefore, all management levels from the plant manager to the foreman level were included in the study comprising a total sample size of eighty-two individuals who participated in the study.

Since a secondary objective of this study was to employ a new behavioral model, and hopefully to assess the operational feasibility of the model, a high degree of cooperation from the employees of the three plants was necessary if any meaningful analyses and conclusions were to result. Table 1 depicts the underlying extent of cooperation that was obtained from higher management for this study and the actual degree of cooperation from the employees who elected to voluntarily participate.

The particular research design that should be followed was dictated largely by the model itself. This point will be made clearer when the model is fully presented in Chapter II. But for our present discussion it is sufficient to broadly indicate the extent and scope of the research study in a somewhat abbreviated format.

The primary and mediating structural variables were measured for the plants and for their respective departments. Largely these factors are given and typically lie outside the short-term control of the plant management. Chapters III, IV, and V will describe the data obtained in greater detail regarding the structural elements that are present.

TABLE 1
DEGREE OF COOPERATION OBTAINED FROM THE THREE PLANTS
IN THE RESEARCH STUDY

	Total	P L A N T		
		A	B	C
Number of departments involved	21	8	6	7
Number of employees included in the study	83	40	21	22
Number of employees cooperating in the study	82	40	21	21
Percent of cooperation in the study	98.8	100.0	100.0	95.5

The leadership style of the highest ranking manager--the plant manager--was measured along with the leadership profiles of the various department supervisors for each of the three plants. Intraplant leadership comparisons will be described as well as the interplant contrasts in leadership.

The department supervisors' perception of behavior and their subordinates' perception was measured for each plant and in turn contrasts

were drawn between the three plants on significant behavior characteristics. Figure 1 depicts the research design that was followed in this study.

Fig. 1.--Research Design

Variable	Plant A, Plant B, and Plant C
<u>Plant Level</u>	
Primary and mediating structural	Structural features of the plant
Leadership	Profile of the plant manager and supervisors based upon immediate subordinates' evaluation
Individual, intragroup, and intergroup behavior	Measures of all management and salaried personnel
<u>Departmental Level</u>	
Primary and mediating structural	Structural features of each department
Leadership	Profiles of the department supervisors based upon immediate subordinates' evaluation
Individual, intragroup, and intergroup behavior	Measures of all management and salaried personnel in each department

Limitations of the Study

A beginning point in the validation of a theoretical model is not a statistical verification of its adequacies based upon limited empirical data, but rather the collection of a body of information that can be subjected to rigorous quantitative analyses. If the model that is employed in this study is to be accepted as a correct representation of organization phenomena (human behavior within organizations), studies

must be conducted to secure empirical data on the variables which underlie the concepts of the model.

Data gained through the use of questionnaires, direct observations, and personal interviews during this study provide information regarding the variables that the model identifies as influencing behavior. The findings from this study, and others that may follow using the model, provide for the increased body of information which is so necessary in the development of new or improved theories.

Therefore, it is not the intention of this study to critically analyze the Melcher Organizational Behavior Model by employing statistical measures of central tendency and variation; determination of significant variable changes by a T-test, median test, and F-test; and by utilizing multiple regression to determine the strength with which an independent variable can predict the dependent variable. This task will be left to other researchers that follow as they attempt to validate the model; utilizing for their analyses data obtained in many diverse studies such as this one.

In addition, it is not the purpose of this study to single out one plant as being more successful vis-à-vis another in realizing specific goals or objectives, whatever these might be. Therefore, no criteria measures of the relative success of the three plants were used.

Importance of the Study

Beyond the stated objectives of this study lies singular pertinence to practicing managers. If the model can identify those factors which directly impinge upon human behavior it will serve as a partial guide in any managerial attempts at predicting or changing behavior. An understanding of the multitude of factors that potentially have a bearing

on behavior can place the manager in a psychological frame of mind conducive to more effective problem search into areas now largely unrecognized and/or ignored and hopefully, a better solution.

The time has arrived where we must now move beyond the narrowness of some of the organizational behavior studies and broaden the scope, and necessarily the complexities, of our subsequent research. Many practicing managers are more concerned with insufficient explanation of human behavior in organizations than they are with the increased complexity associated with a more encompassing approach. While it is true that some managers are seeking new answers to their people problems, it is also equally true, and probably to a greater extent, other practicing managers are alarmingly myopic in their approaches to operational problems. For example, consider an organization that finds itself with an extraordinarily high absenteeism rate. Two typically expressed reasons for their absenteeism problems is that the employees are at fault (a selection from a number of demeaning statements about their employees usually follows), or that one has to expect it because of the job (meaning the content or nature of the task). On the other hand, if the managers are aware of and understand the variety of factors that may explain their absenteeism problems, they might be more inclined to center their attentions on true problem solution and not engage in symptomatic actions or no actions at all.

A systems model can aid managers in providing for an increase in the knowledge and understanding of the multiple factors which influence behavior. Such an orientation on the part of its managers and supervisors will result in gains being made in effectiveness and efficiency for the entire organization. These are worthwhile goals to pursue by all types of organizations.

Although the study has several specific objectives toward which the majority of attention is directed, the author would indeed be remiss if the underlying importance of the study were not noted.

Methods of Data Gathering and Measurement

Familiarization with the corporation, the plants, and the manufacturing process was obtained over a one and a half year period in which the researcher was engaged in a series of management development and training programs at the plant level. The information obtained served as the basis for refinement of the questionnaire and provided additional insights into a variety of interrelationships that were important for the final analyses. Further, company documents were surveyed in order to gain additional understanding of the nature and functions of the plants and the departments within each plant.

Two techniques were employed in the actual collection of data. One was the use of a questionnaire (see Appendix A). The second was personal interviews. During the early stages of the research the unstructured interviews that were conducted covered a broad range of areas and problems within the plant and corporation. Later, the interviews that followed were more structured and specific. Through the interviews it was determined that reference to "work groups" was probably a clearer designation than reference to departments. The precise definition of the various "work groups" under study becomes critical within the context of the model. Therefore, attention must be directed toward the assurance that the respondents understand what the various work groups are and the particular work group with which they identified.

Within the operational context of the theoretical behavioral model, questionnaires had been developed by Dr. Melcher to measure behavior

and leadership dimensions. Dr. Melcher's original questionnaire with some modifications was used to measure behavior. The questionnaire is purported to measure individual behavior, intragroup behavior, and intergroup behavior. These correspond directly with the thirty-three behavior variables defined in the theoretical model. The modified questionnaire, which was used to measure behavior, had many of the questions reworded in keeping with the organizations' type of business and vernacular, had the descriptive headings omitted and the order of the questions was randomized to reduce the possibility that some respondents would react to these headings and general groups of questions instead of responding to the content of each question. An example of the behavior questionnaire appears as a part of Appendix A, and Appendix C provides a key to the behavioral questionnaire with headings added and non-randomized.

The basis for the development of the leadership questionnaire was Dr. Melcher's Leadership Profile which purported to measure the leadership dimensions of representation, interaction, standards, goal emphasis, participation, direction, rule orientation, and motivation. In addition, miscellaneous leadership dimensions of technical qualifications, action orientation, problem skills, and personal abilities were included (see the glossary for the operational definitions of the leadership variables). The original instrument contained forty-three questions with the last being an open-ended question requesting the respondent to list any factors he felt might have been omitted in describing the leadership dimension.

A modified questionnaire was developed to measure the same dimensions of leadership but had the miscellaneous leadership questions

appear as separate numbered questions and the open-ended question was omitted. The modified questionnaire consisted of sixty-six questions which were worded to fit the research study. The descriptive headings of the original questionnaire were eliminated and the order of the question was randomized. An example of the leadership questionnaire appears as a part of Appendix A, and a key to the leadership questionnaire with headings and non-randomized arrangement is provided in Appendix B.

The model provided for personal observation and interviewing of key personnel, with questions based on the variables identified by the model, to be utilized to measure the structural elements that purport to influence and determine behavior (see the glossary for the definition and discussion of the variables). This method was considered to be superior in obtaining the structural indices since a considerable number of explanations, definitions and examples were necessary to assure that the respondent understood the question.

It was decided that the reliability and validity of the structural data would be increased by the use of a combination of personal interviews, observation, and a questionnaire. A questionnaire based upon the operational definitions of the structural variables was developed containing fifty-three questions (see Appendix A). Unlike the leadership and behavioral questionnaires which called for the respondent's own personal perceptions, the structural questionnaire that was developed asked for facts that were non-personal by nature. Therefore, no attempt was made to reduce any possible response-set or halo effect since it was believed not to exist in this instance.

At the time that this study was undertaken a personality questionnaire had not been thoroughly developed to the extent which the behavioral and leadership had. It was decided that no appreciable loss in meeting the objectives of this study would result by the exclusion of the personality dimension.

A pilot test of the questionnaires that were used was conducted in a different but similar type of organization to the three that were included in this study. Poorly worded questions and other necessary corrections were made prior to administering the final questionnaires to the individuals in the study.

Implementation of the Study

Top management in each of the plants fully cooperated throughout the study. Prior to the time that the questionnaire was distributed to the participants in the study, an announcement was communicated by the plant managers to all salaried personnel regarding who was conducting the study, what the study was for, and briefly its importance. They were requested to attend a meeting, during normal working time, to learn more of the study. The researcher during this meeting read aloud the memorandum that appears as a part of the research questionnaire in Appendix A. The fact that the study was the researcher's alone and not a company undertaking was stressed. The confidentiality of the study and the desire for full voluntary cooperation was repeated several times during the meeting. An organizational chart depicting the various work groups referred to in the questionnaire was drawn on a blackboard. This was viewed as being a safeguard against any possible misunderstanding on the part of the participants as to what work group they belonged. As a further check, the participants were each given a code

number (for the exclusive use of the researcher) and the work group was written on their individual questionnaire. Each participant was given a plain envelope and instructed to place his completed questionnaire in the envelope and seal it. The researcher was available during the entire time to answer questions and to personally collect all completed questionnaires. Most participants completed the questionnaire in one hour.

Those employees on the night and afternoon shifts and individuals on vacation completed and returned their questionnaires later. The high percentage of participation and cooperation from all three plants has already been noted and depicted in Table 1.

Succeeding Chapters

Chapter II presents the rationale and the thesis underlying the Melcher Organizational Behavior Model. The determinants of human behavior is fully developed and their importance to the organization are noted. The primary and secondary structural variables along with leadership are discussed as to their influencing effects on behavior. Lastly, Chapter II deals with some qualifications that must be made in the use of the model in any attempt at explaining and predicting behavior.

Chapters III, IV and V follow an identical format. Each of the three chapters will describe one of the plants covered in this study. A longitudinal behavioral profile of each plant will be presented along with the necessary description and results of the questionnaire in support of the behavioral profile.

Structural and leadership factors that influence the resulting behavior exhibited in each plant will be described along intra- and inter-departmental lines (see Figure 1, page 6, for a diagrammatical presentation that summarizes the content of Chapters III, IV and V).

The analyses and interpretation of the contrasts among the three plants will be covered in Chapter VI. The significant variables that have interacted to cause the behavioral patterns that exist in the three plants will be isolated and their differences assessed.

The conclusions that result from the analyses of the differences and their impact on behavior will be dealt with in the final chapter--Chapter VII. Summary and conclusions as to the operational feasibility--the problems encountered with the model during the research and the model's value in empirical research--will also be drawn.

CHAPTER II

THE MELCHER ORGANIZATIONAL BEHAVIOR MODEL¹

Introduction

The basic model used in this study is a theoretical behavioral systems model developed by Dr. Arlyn J. Melcher of the Kent State University College of Business Administration. The general theme of the model is that "behavior is caused by identifiable factors."² The model maintains that "individuals function in structured context, and behavior is caused, in part, by the pressures existing within that context and, in part, by the personalities individuals bring to the situation."³ The set of structural variables and the leadership patterns that are present are used to define the structured context of an organization.

One of the basic objectives of the Melcher model is to identify the determinants of behavior in any institutional setting, by rigorous analytical treatment. Attention has been directed toward definitional independence and operational measure of each factor included in the model. The factors, or variables, that are included "have been identified largely by other researchers and theorists in the area."⁴ The Melcher

¹This chapter relies heavily on an article by Arlyn J. Melcher, "A Systems Model," in A. Negandhi, and J. Schwitter (eds.), Organizational Behavior Models (Kent, Ohio: Comparative Administration Research Institute of the Bureau of Economic and Business Research, Kent State University, 1970), 109-38.

²Ibid., p. 118. ³Ibid. ⁴Ibid., p. 110.

model "attempts to integrate the efforts of many researchers"⁵ into a framework that is "deliberately designed to unravel specific aspects of behavior."⁶ The model's "focus is on individual behavior, lateral and vertical, and intergroup relations."⁷

Structural Variables

The structural variables of the model describe the existing structure of the organization. These factors have been subdivided into primary and mediating. The organization's size, work flow, spatial-physical-temporal factors, work demands, and heuristics make up the primary structural variables.⁸ As the organization moves from what would be described as a simple organizational type to one of increased complexity (movement along the model's continuums from left to right), the primary structural variables contribute toward a heightening of stress being exhibited in the organization. For example, if the "organization increases in size, the work is more integrative, work demands are more unstable, the spatial-physical-temporal conditions are more dispersed, and heuristics more unprogrammed, these changing factors "exert pressure toward the disintegration of intragroup and intergroup relations."⁹ The resultant condition would be one of "communication breakdown and increased conflict."¹⁰ "Spontaneous methods and interpersonal interactions that are adequate for coordination and motivation in simple organizations break down rapidly with increased complexity."¹¹

⁵Ibid., p. 110. ⁶Ibid., p. 116. ⁷Ibid.

⁸The reader should refer to the glossary for a full definition, discussion, and the operational measures of all structural and leadership variables and subvariables.

⁹Melcher, p. 121. ¹⁰Ibid. ¹¹Ibid.

The disintegrating pressures that develop may be reversed by the mediating variables of formal authority relationships, control systems, and information systems and their subvariables that are provided in the model. The article continues to offer examples of the results of increased organization complexity and the manner in which the mediating variables operate to lessen the impact. For example, "formal authority relationships are specified"¹² with the accompanying increase in the number of organizational levels, movement toward departmentation, and movement toward an increase in centralized decision making.

The control system of the organization undergoes change with increased complexity in that it moves from what is described as an institutional to an individual system. The model recognizes the need for "explicit standards," . . . "an evaluation system," . . . and, "a formal system to reward those who meet the standards and apply sanctions against those who do not."¹³

Associated with an increase in organization complexity is also the movement away from an informal communication system to one that formally takes into account the informational requirements of the organization. The information system evolves from "a complete network toward a single linkage," from a single means to a multiple method of communication channels being employed, "from real time to delayed time transmittal," . . . and, toward "formal provisions . . . made for collecting and filing current and historical data, sorting and classifying it, and coding it so that it can be readily retrieved."¹⁴

Figure 2 represents a summary of the primary and mediating structural variables that have been discussed along with the leadership

¹²Ibid., p. 121. ¹³Ibid., p. 122. ¹⁴Ibid.

I. PRIMARY STRUCTURAL VARIABLES

	MEASUREMENT CONTINUUM								
	1	2	3	4	5	6	7	8	9
A. Size:									
B. Work Flow:									
C. Spatial-Physical-Temporal Factors:									
D. Work Demands:									
E. Heuristics:									
	Small	Nonintegrated	Concentrated	Stable	Predictable				Large
									Integrated
									Dispersed
									Unstable
									Unpredictable

II. MEDIATING STRUCTURAL VARIABLES

	MEASUREMENT CONTINUUM								
	1	2	3	4	5	6	7	8	9
A. Formal Authority Relationships:									
1. Levels:									
2. Delegation:									
3. Departmentation:									
B. Control System:									
1. Performance Standards:									
2. Measuring Instruments:									
3. Rewards-Penalty:									
C. Information System:									
1. Communication Center Linkage:									
2. Channel Density:									
3. Transmission Time:									
4. Storage-Retrieval System:									
	Diffuse	Few	Decentralized	Autonomous	Institutional	Undefined	No formal	Little	Specific
									.Many
									Centralized
									Interdependent
									Individual
									.Well-defined
									Highly formal
									.Direct
									Simple
									Complex
									Indirect
									.Multiple
									Delayed
									Extensive

Fig. 2.--Summary of the Structural and Leadership Variables

III. LEADERSHIP VARIABLES

- A. Representation:
- B. Interaction:
- C. Standards:
- D. Goal Emphasis:
- E. Participation:
- F. Direction:
- G. Rule Orientation:
- H. Motivation:

MEASUREMENT CONTINUUM									
1	2	3	4	5	6	7	8	9	
	Upward.	.	.	.	.	.	.	.	Downward
	Lateral	.	.	.	.	.	.	.	Vertical
	Low	.	.	.	.	.	.	.	High
	Group	.	.	.	.	.	.	.	Individual
	Extensive	.	.	.	.	.	.	.	Restrictive
	Laissez faire	.	.	.	.	.	.	.	Close
	Judgmental.	.	.	.	.	.	.	.	Strict
	Rewards	.	.	.	.	.	.	.	Penalties

IV. MISCELLANEOUS LEADERSHIP DIMENSIONS

- A. Technical Qualifications:
- B. Action Orientation:
- C. Problem Skills:
- D. Personal Abilities and Orientation:

MEASUREMENT CONTINUUM									
1	2	3	4	5	6	7	8	9	
	Limited	.	.	.	.	.	.	.	Extensive
	Passive	.	.	.	.	.	.	.	Active
	Limited	.	.	.	.	.	.	.	Extensive
	Negative.	.	.	.	.	.	.	.	Positive

Fig. 2.--Continued

variables that will be the bases of the discussion in the next section. The left side of the continuums describe simple organizations while the right side of the continuums represent complex ones. Melcher notes that while these are extremes most organizations can be described as being some combination along the scale values of the individual variables identified in the model.

Leadership Variables

The leadership variables which are a part of the model focus on what the leader does, his functions, in performing his task as group or organizational leader. He performs his various functions within an environment which to a large extent, according to Melcher, is determined and beyond the short-term control of the leader. The leadership variables are directed toward the development of a profile which characterizes the particular leader's approach to his job. The emphasis is upon how a supervisor relates to his subordinates, his superiors, and higher level management in the organization.

Although a leader largely operates within a given structured context, "the way in which leadership functions are carried out determines the extent to which leadership will contribute to or further adversely affect the ability of subordinates to be effective."¹⁵ A functional or a dysfunctional organization situation may be altered somewhat by the important leadership variable included in the model. "The supervisor, for instance, may be able to introduce some flexibility into a situation that is rigid and nonadaptable to conditions."¹⁶

¹⁵Ibid., p. 124. ¹⁶Ibid.

A "democratic leadership" style would be characterized by points 1, 2, and 3 on the leadership continuum presented in Figure 2; a "general leadership" style would cover scale values 4, 5, and 6; and, an "autocratic leader" would be represented by scale values 7, 8, and 9.¹⁷ "There probably is considerable interaction between the structured context and leadership style," . . . with the unlikely result "that the same leader style would be appropriate for different contexts."¹⁸ The reader should refer to the glossary for full discussion, definition, and operational measure for each of the leadership variables of the model.

Behavioral Variables

The model includes "individual behavior patterns, intragroup lateral and vertical relations, and intergroup relations" as significant "dimensions of behavior" that are "important to the function of an organization."¹⁹ The variables which comprise the behavioral patterns of an organization are presented in Figure 3.

The model includes nine factors of individual behavior that are viewed as being "important dimensions" which are "essential to the function of an organization."²⁰ They are "job involvement, commitment to meeting standards, initiative, self-improvement, work goal commitment, frustration levels, sense of achievement, absenteeism, and turnover."²¹

Intragroup and intergroup relations are also considered in the model as important dimensions affecting the organization's operations. "Some significant dimensions of lateral relations within and among groups are confidence and trust, extent and nature of interaction patterns, accuracy and completeness of communication, degree of cooperation,

¹⁷Ibid., p. 125. ¹⁸Ibid. ¹⁹Ibid., p. 116. ²⁰Ibid., p. 117.

²¹Ibid.

I. BEHAVIORAL VARIABLES

A. Individual Behavior

1. Job Involvement
2. Commitment to Meeting Standards
3. Initiative
4. Self-Improvement
5. Work-Goal Commitment
6. Frustration Levels
7. Sense of Achievement
8. Absenteeism
9. Turnover

MEASUREMENT CONTINUUM									
1	2	3	4	5	6	7	8	9	
Low	High
Rarely.	Almost always
Little.	High
Little.	High
Rarely.	Almost always
Almost always	Rarely
Rarely.	Almost always
Almost always	Rarely
Almost always	Rarely

B. Intragroup Behavior: Lateral Relations

10. Confidence and Trust
11. Job Related Communication
12. Non-Job Related Communication
13. Cooperation Patterns
14. Group Unity
15. Interaction off the Job

Rarely. . .	. . .	. . .	. . .	. . .	. . .	. . .	Almost	always
Rarely. . .	. . .	. . .	. . .	. . .	. . .	. . .	Almost	always
Rarely. . .	. . .	. . .	. . .	. . .	. . .	. . .	Almost	always
Rarely. . .	. . .	. . .	. . .	. . .	. . .	. . .	Almost	always
Rarely. . .	. . .	. . .	. . .	. . .	. . .	. . .	Almost	always
Rarely. . .	. . .	. . .	. . .	. . .	. . .	. . .	Almost	always

Fig. 3.--Summary of the Behavioral Indices

		MEASUREMENT CONTINUUM								
		1	2	3	4	5	6	7	8	9
C. Intragroup Behavior: Vertical Relations										
16.	Trust and Confidence--Downward	Rarely	.	.	.	.	.	.	.	.Almost always
17.	Trust and Confidence--Upward	Rarely	.	.	.	.	.	.	.	.Almost always
18.	Requested Information	Rarely	.	.	.	.	.	.	.	.Almost always
19.	Communication Screening	Almost always.	.	.	.	.	.	.	.	.Rarely
20.	Job Information	Rarely.....	.	.	.	.	.	.	.	.Almost always
21.	Human Relations Information	Rarely	.	.	.	.	.	.	.	.Almost always
22.	Cooperation and Teamwork	Rarely	.	.	.	.	.	.	.	.Almost always
23.	Acceptance of Immediate Supervisor's Decisions	Rarely	.	.	.	.	.	.	.	.Very often
24.	Acceptance of Higher Level Management Decisions	Rarely	.	.	.	.	.	.	.	.Very often
25.	Acceptance of Staff Group Decisions	Rarely	.	.	.	.	.	.	.	.Almost always
D. Intergroup Behavior										
26.	Confidence and Trust	Rarely	.	.	.	.	.	.	.	.Almost always
27.	Communications Accuracy	Rarely	.	.	.	.	.	.	.	.Almost always
28.	Communications Screening	Almost always.	.	.	.	.	.	.	.	.Rarely
29.	Informal Communications	Rarely	.	.	.	.	.	.	.	.Almost always
30.	Cooperation and Teamwork	Rarely	.	.	.	.	.	.	.	.Almost always
31.	Team Spirit	Rarely	.	.	.	.	.	.	.	.Almost always
32.	Acceptance of Decisions	Rarely	.	.	.	.	.	.	.	.Almost always
33.	Interaction Patterns	Rarely	.	.	.	.	.	.	.	.Almost always

Fig. 3.--Continued

cohesiveness, and group loyalty."²² Vertical superior/subordinate relations within the same group are also important. They include mutual "trust and confidence," . . . "accuracy and completeness" of superior requested information, and the extent "to which subordinates initiate communication upward."²³ The additional behavior variables of "cooperation, teamwork, loyalty, and subordinates' acceptance of decisions made by supervisors or specialist groups outside the department,"²⁴ are included in the model as key elements in the proper functioning of an organization.

Dr. Melcher states that "these behavioral dimensions are important since they affect:

1. The degree of cooperation and coordination among individuals and groups that perform specialized tasks.
2. The extent to which spontaneity in personal relations develops that permits efforts to be directed to task requirements rather than group maintenance functions as mediating conflict.
3. The degree of collection and exchange of current information (needed in making daily decisions on the job, and in short term planning and policy formulation) among those who have the data and those who need it.
4. The extent to which there is an exchange of ideas and a pooling of technical and professional training to solve both unusual, unique, and regular, recurring problems.
5. The extent to which attention and effort is directed toward organizational goals rather than toward the self interest of individuals and groups."²⁵

A questionnaire, which includes all these behavioral indices, can be used to develop a "behavioral profile" that will allow for the drawing of contrasts among and/or within organizations and "showing the changes through time. . . ."²⁶

²²Ibid., p. 117. ²³Ibid. ²⁴Ibid. ²⁵Ibid., pp. 117-18. ²⁶Ibid.

Figures 2 and 3 together make up the behavior systems model. The overall model assumes that generally identical organizational contexts--expressed in terms of the structural and leadership variables--should result in similar behavioral patterns emerging. The reverse of this is equally true according to the logic of the model.²⁷ Melcher states that "the test of the model basically is whether one can predict and explain the causes of behavior in any organizational setting."²⁸ In summary, the environment in which a person operates-- defined in terms of the structural variables and the leadership style--exerts pressures upon individuals and groups which results in a predictable and explainable behavioral pattern emerging.

Limitations of the Model

The model does not take into consideration the pressures upon behavior as a result of membership in multiple organizations, other than the work organization for example, which the individual primarily identifies with. In addition, "the model does not include a set of environmental differences that exert pressures on an organization."²⁹ The assumption is that the external environmental pressures are not generally that important in molding organizational behavior. Exceptions to this statement do exist but they are atypical and not typical instance.

Further, "it is assumed that individual perception measures approximate objective reality," . . . "the model is static in character," . . . and that it "is a behavior model and not an effectiveness model."³⁰

²⁷Ibid., p. 121. ²⁸Ibid. ²⁹Ibid., p. 128. ³⁰Ibid., p. 129.

A qualification is noted regarding this last point: "The emerging behavioral patterns presumably are directly relevant to the effectiveness of the organization."³¹

Conclusion

In concluding the article Dr. Melcher notes several benefits which are associated with the model. In an abbreviated summary form they are:

1. Presenting a set of variables in model form imposes an analytical discipline on precisely defining variables so that they are complementary.
2. The additivity of studies is increased.
3. The possibility of doing controlled studies when one or more variables are systematically explored is increased.
4. The model contributes to the ability to critically review, assess and integrate the literature.
5. Permits placing the question of determinants of behavior in organizations in a larger perspective.
6. And finally, the model expressly identifies the multiple sets of variables that may be influencing behavior, thus providing the leverage points necessary for achieving change.³²

³¹Ibid., p. 129. ³²Ibid., pp. 130-31.

CHAPTER III

DATA DESCRIPTION OF PLANT A

Introduction

Description of the data collected for Plant A is presented in this chapter. Each variable and all important sub-variables constituting the major areas of primary structural, mediating structural, leadership, and behavioral elements are discussed. The reader should refer to the glossary for a complete definition of each variable. Summary profiles depicting pictorially the responses to the various factors are also presented in Appendix D as a supplemental aid to the tables.

A total of forty salaried personnel structured into two levels and eight work groups, or departments, comprise Plant A of the research study. The plant manager was not requested to participate in the study although his leadership style was described by his immediate subordinates. Figure 4 depicts the organization structure of Plant A. One point of clarification needs to be made regarding the superior-subordinate relationships involving work group 6; the office supervisor reports directly to the plant manager on some work matters and to the supervisor, work group 6, on others. The supervisor of work group 6 evaluated the leadership style of the plant manager, but the clerks of work group 6 evaluated the leadership style of the office supervisor. This relationship holds true for other areas in which work group 6 responded.

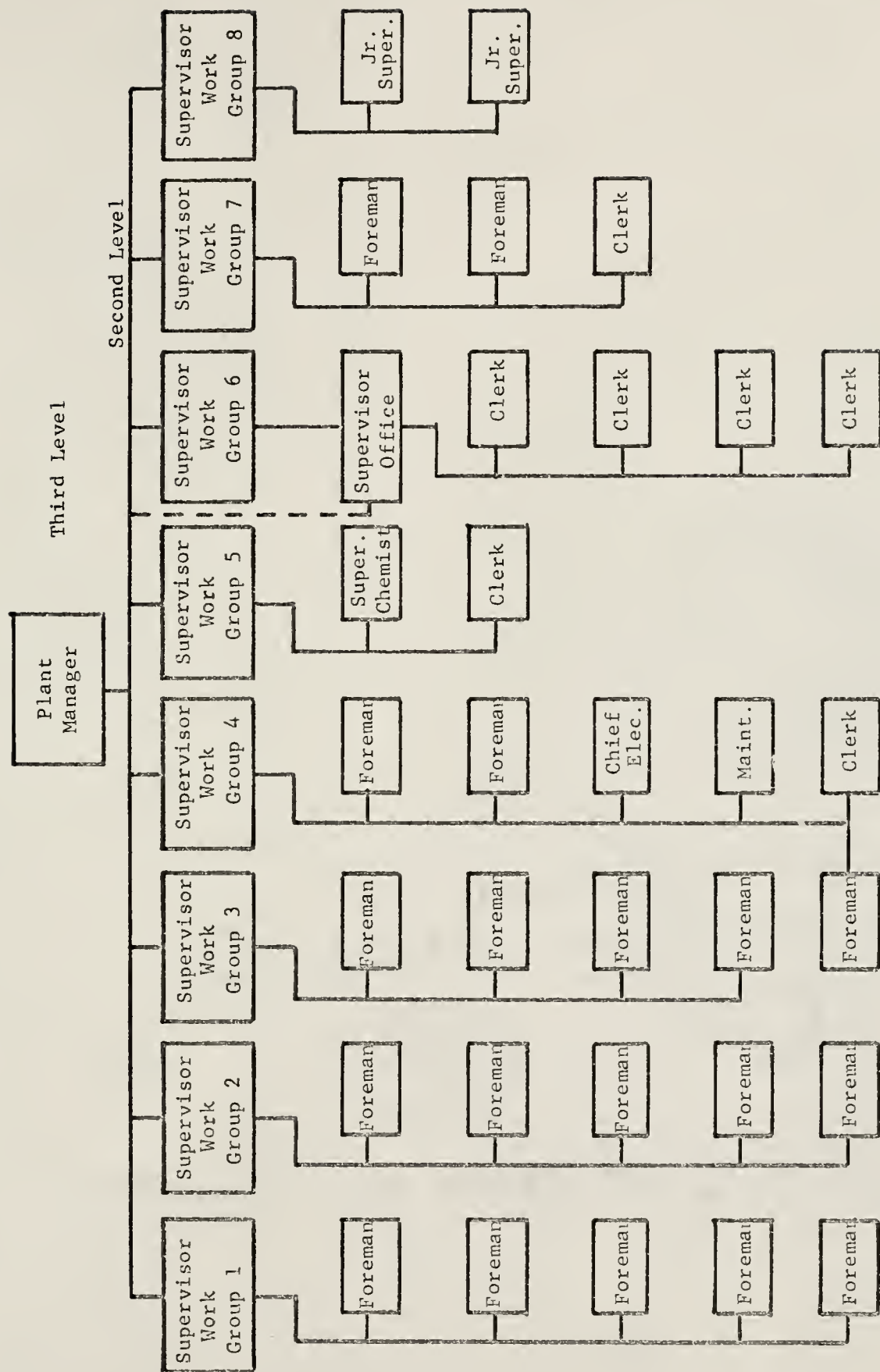


Fig. 4.--Organization Chart, Plant A.

Primary Structural Variables of Plant A

Size, work flow, spatial-physical-temporal factors, work demands, and heuristics are the primary structural variables. Table 2 reports the average responses to the primary structural questionnaire items by the particular variable and work group of Plant A.

Size

The size of the work groups is the total number of subordinates formally assigned to the department and the number of levels from the first line supervisor to the plant manager. The numerical value is obtained from the size table included in the glossary. Two levels of each department are under study--the operative or foreman level (the first level) and the supervisory level (the second level). Work groups 1 through 4 can be described as medium size whereas work groups 5 through 8 are decidedly small in size.

Work Flow

The degree of input-output relationships that exists within and between the eight work groups can be described as ranging from non-integrated to integrated. A nonintegrated work flow exists where within the same unit or between each unit of the organization there is no relationship between the input-output of resources taking place. In other words, each person within the same unit and each unit within the organization is autonomous as far as the work flow is concerned. An integrated work flow exists where outputs become inputs for individuals within a department and between departments.

TABLE 2

PLANT A AVERAGE RESPONSE TO PRIMARY
STRUCTURAL QUESTIONNAIRE ITEMS BY
VARIABLE AND WORK GROUP

Variable	Work Group							
	1	2	3	4	5	6	7	8
Size ^a	4	4	3	4	1	1	1	1
Work Flow:								
Intragroup	5.6	5.4	5.8	5.2	4.5	5.5	5.5	2.7
Intergroup:								
Work group 1	--	6.4	5.7	5.8	--	--	--	--
" " 2	6.0	--	6.1	--	--	--	--	--
" " 3	5.1	4.7	--	--	--	--	--	--
" " 4	5.3	5.5	5.3	--	--	--	--	--
" " 5	6.0	5.9	6.3	--	--	--	--	--
" " 6	5.5	5.2	5.3	5.3	5.7	--	5.8	5.4
" " 7	6.9	6.9	7.2	6.9	--	--	--	--
" " 8	4.8	4.6	3.7	4.4	--	--	--	--
S-P-T Factors:								
Intragroup	5.9	6.2	6.4	2.7	3.4	2.6	3.4	3.5
Intergroup:								
Work group 1	--	5.7	6.2	5.0	--	--	--	--
" " 2	5.6	--	6.2	--	--	--	--	--
" " 3	7.2	7.2	--	--	--	--	--	--
" " 4	6.0	6.1	6.1	--	--	--	--	--
" " 5	7.0	6.7	7.3	--	--	--	--	--
" " 6	6.2	6.1	6.1	6.1	5.7	--	5.5	4.0
" " 7	6.8	6.8	6.8	5.5	--	--	--	--
" " 8	7.8	7.9	7.3	7.7	--	--	--	--
Work Demands	2.8	4.8	3.0	5.3	2.3	2.0	3.7	4.7
Heuristics	1.8	2.4	3.2	1.6	2.3	1.2	2.2	3.0

^aThe size average responses are arrived at by using Table 23, which appears in the glossary.

Intragroup work flow

Only work group 8 can be classified as somewhat nonintegrated whereas work groups 1 through 7 have partially integrated work flows existing within their respective work groups or departments. There exists within work group 8 a lower degree of job specialization, less interdependency between group members, a more extensive change at utilization of adjustments to any work flow disruption, and a higher degree of job interchangeability between group members than that existing in the other seven work groups.

Intergroup work flow

The important intergroup work flows that existed among the various departments was established during the initial observation and interview sessions that took place prior to the actual data collection. We are interested in the significant relations that are present within the organization that could contribute to the orderly or disjointed flow of task requirements of the various departments. Plant A (as are Plants B and C) is a process type manufacturing operation. The actual production of the product takes place within and between work groups 1, 2, and 3. The degree of work flow integration is fairly high between these three work groups but is moderated somewhat by the existence of departmental storage facilities. This allows for a high degree of adjustments to take place within a specific production department in case of disruption occurring in the previous stage of the production process. Work groups 4 through 8 are essentially supportive departments.

Table 2 depicts the degree of intergroup work flow that exists between the eight work groups of Plant A. The extent of integration among the three production work groups is fairly consistent. The most

important, or the one that is somewhat more integrated than the others, is work group 1 and work group 2 (a 6.4 response). The least integrated of the three are work groups 2 and 3 (a 4.7 response). Considering the overall degree of work flow integration existing between work groups 1, 2 and 3, it can be said that the production process of Plant A's commodity is fairly integrated.

This is also true to a great extent for the relations that exist between the remaining work groups. There appears a fairly consistent response rate across all the work groups. Two exceptions would be work groups 7 and 8. Work group 7's degree of work flow integration with group 1 through 4 is more closely integrated with these four groups than that existing between other groups in the plant. Finally, group 8 can be characterized as the group having the most nonintegrated work flow impact on groups 1 through 4 (responses ranging from 3.7 to 4.8).

Spatial-Physical-Temporal Factors

The extent to which the work groups in Plant A can be characterized as being concentrated or dispersed is measured by the factors of distance, spatial orientation, physical barriers, time, and noise level. The spatial-physical-temporal (S-P-T) factors for intragroup and intergroup that exist within Plant A were measured.

Intragroup s-p-t factors

The production work groups (groups 1 through 3) were somewhat dispersed, with all three groups responding between 5.9 and 6.4. The remaining work groups are decidedly concentrated as far as the S-P-T factors are concerned, with responses ranging from 2.6 to 3.5.

Intergroup s-p-t factors

Work group 1 is moderately to somewhat dispersed from the three important work groups for which data were obtained. This relationship also generally holds true for work groups 2, 4, and 6 and their separation from other groups. Work groups 3, 5, 7 and 8 exhibit the highest degree of separation from those work groups that were measured. Work group 6 shares the least amount of separation from work group 8 (4.0 -- somewhat concentrated) of all the work groups. (Work groups 6 and 8 are on the same floor and across the hall from each other.)

Work Demands

The relative degree of stability in the demands that are made upon the work groups as they perform their jobs can be described as ranging from stable to unstable.

Work group 6 has the highest stability (2.0) in work demands of the eight work groups. The work group that has the least amount of stability -- group 4 -- with 5.3 can be described as having about half the time stable/unstable demands. All work groups in Plant A fall on the stable side of the work demands' measurement continuum.

Heuristics

The last variable to be considered regarding the primary structural variables of Plant A is heuristics -- the extent that the work groups' tasks are predictable and the extent that help from others to solve a particular problem is available. All work groups in Plant A can be characterized as having their actions or decisions ranging from either fairly predictable (3.2) or almost totally predictable (1.2). Otherwise, Plant A has work groups that exhibit fairly routine search procedures vis-à-vis task requirements.

Figures summarizing the primary structural variables in a profile form for all work groups in Plant A appear as part of Appendix D. A profile of the mediating structural variables, which will be discussed in the next section, is also included in Appendix D.

Mediating Structural Variables of Plant A

The major mediating structural variables are formal authority relationships, control system, and information system. Three elements comprise the formal authority relationship: (1) delegation; (2) levels; and (3) departmentation. Table 3 reports the responses to these questionnaire items but the discussion in this section is in terms of the main variable. The reader again should refer to the glossary for a full definition of all the main variables and their sub-variables.

TABLE 3

PLANT A AVERAGE RESPONSE TO MEDIATING
STRUCTURAL QUESTIONNAIRE ITEMS BY
VARIABLE AND WORK GROUP

Variable	Work Group							
	1	2	3	4	5	6	7	8
Formal Authority:	4.1	4.2	4.6	3.8	3.4	4.5	4.1	3.2
Delegation	3.6	3.3	4.9	3.8	1.8	4.9	3.6	3.5
Levels	3.9	4.2	4.7	3.1	2.8	4.2	4.2	2.0
Departmentation	4.7	5.0	4.2	4.4	5.7	4.4	4.5	4.2
Control System	6.1	6.8	6.3	4.7	6.4	7.1	5.3	4.0
Information System:								
Intragroup	6.1	5.3	5.7	5.8	5.3	5.8	5.7	5.5
Intergroup	5.1	4.5	5.6	5.1	5.2	5.0	5.1	5.1
Vertical	5.2	5.4	5.4	5.1	4.4	5.5	5.3	4.9

Formal Authority

The formal authority relationships that exist within each of the eight work groups of Plant A can be described as fairly diffuse. Work group 8 has the highest extent of unspecified formal authority relationships at 3.2, while work group 3 is at the other extreme with a relatively higher degree of specified formal authority at 4.6. Each of the remaining work groups lies between these two narrow ranges.

Control System

The formal system for evaluating performance which includes standards, measuring instruments, and the procedure for allocating rewards-penalties constitutes the existing control system of Plant A. The system may range from an institutional type where there are no formal specifications established to one where formal individual performance systems clearly exist.

Work groups 4, 7 and 8 have a partial control system formalized regarding employee performance (responses 4.7, 5.3 and 4.0 respectively). The remaining work groups have a relatively higher incident of formalized individual performance systems existing within their work group. Work group 7 has the most formalized control system specified (7.1) of all eight work groups in Plant A.

Information System

The formal network of receiving and transmitting centers and the communication relationships that exist comprise the information system of an organization. The resulting system may be described as ranging from a simple to a complex information system. The information system for Plant A will be discussed from the standpoint of intragroup, intergroup, and vertical relations.

Intragroup information system

All work groups can be characterized as possessing a moderate complex intragroup information system. That is, within their respective groups the system is partially rationalized and defined as to the network that exists for receiving and transmitting information.

Intergroup information system

The information system that exists between the eight work groups of Plant A can be described as moderate simple/complex. The response values depicted in Table 3 for this variable range across the center of the information system continuum from 4.5 to 5.6.

Vertical information system

Generally the same pattern exists for the vertical information system for Plant A as was true for the intergroup system. That is, it can be described as moderate simple/complex with variable values from 4.4 to 5.5 on the information system continuum.

Figures appearing in Appendix D pictorially show the similarity that exists for all the work groups vis-à-vis the information system as well as the other two main mediating structural variables previously discussed.

Leadership Dimensions of Plant A

The leadership style of the plant manager, as evaluated by his immediate subordinates (the second level supervisors), and the leadership styles of the eight second level supervisors, as they are evaluated by their immediate subordinates, are described in this section. The plant manager and the supervisors are characterized in the way in which they carry out their leadership roles by describing twelve dimensions

of leadership. These dimensions are: (1) representation, (2) interaction, (3) standards, (4) goal emphasis, (5) participation, (6) direction, (7) rule orientation, (8) motivation, (9) technical qualification, (10) action orientation, (11) problem skills, and (12) personal abilities.

In describing the leadership styles present in Plant A a broad arbitrary classification scheme is used in some instances. The classification scheme that is used for the first eight leadership dimensions listed above is: (1) response values of 1.0 to 3.5, classified as an example of a "democratic" leadership style; (2) values of 3.6 to 6.4, termed a "general" style; and (3) responses of 6.5 to 9.0, regarded as "autocratic" leadership indicators.

For the four miscellaneous leadership dimensions the broad descriptive classification scheme is as follows: (1) response values of 1.0 to 3.5 are termed examples of "low competency"; (2) values of 3.6 to 6.4 are described as "moderate competency"; and (3) responses of 6.5 to 9.0 are described as "high competency."

In some instances the descriptions are in terms of the individual measurement continua. For example, an average response of 3.1 to the three questions measuring the dimension of "standards" could be described in terms of the measurement continuum ranging from low to high standards or in terms of the broad classification scheme as an example of "democratic" leadership.

This same approach is followed in describing the leadership dimensions of Plant B in Chapter IV, and Plant C in Chapter V.

Plant Manager's Leadership Style

Table 4 reports the average response of nine supervisors to the leadership questionnaire. The office supervisor of work group 6 was

TABLE 4

PLANT A AVERAGE RESPONSE OF NINE SECOND LEVEL SUPERVISORS
TO LEADERSHIP QUESTIONNAIRE EVALUATING THE PLANT
MANAGER'S LEADERSHIP STYLE BY VARIABLE

Variable	Average Response
<u>Leadership Dimensions</u>	
Representation	4.0
Interaction.	4.1
Standards.	5.6
Goal Emphasis.	6.0
Participation.	3.0
Direction.	4.2
Rule Orientation	5.0
Motivation	3.1
<u>Miscellaneous Leadership Dimensions</u>	
Technical Qualifications	7.5
Action Orientation	8.1
Problem Skills	7.0
Personal Abilities and Orientation	7.1

included with the eight supervisors who evaluated the plant manager since a significant superior-subordinate relationship existed in this instance.

Representation

The plant manager is viewed as usually (4.0) representing his subordinates' interests to higher level management. He usually acts as the spokesman and defender of the nine supervisors to his superiors and other groups.

Interaction

Quite often lateral interaction (4.1) among the nine supervisors is encouraged by the plant manager. He usually tries to meet with the supervisors in order to work out some common work problems but still encourages more lateral interaction between the various supervisors than with himself.

Standards

Moderate high (5.6) standards are emphasized by the plant manager while usually still allowing the supervisors some freedom in the establishment of the level of performance.

Goal emphasis

Somewhat individual goals (6.0) are emphasized, as opposed to group goals, in realizing job completion with stress usually being placed upon individual responsibility.

Participation

The plant manager makes use of rather extensive participation (3.0) in arriving at decisions. He usually involves his subordinates in the decision making process.

Direction

General direction (4.2) of his subordinates is followed by the plant manager. He usually prefers to be flexible and somewhat passive when guidance is required.

Rule orientation

As far as rule orientation is concerned, the plant manager can be characterized as possessing a general attitude towards observing rules, policies, and procedures that are established.

Motivation

The nine second level supervisors responded that the use of rewards to motivate performance was the usual approach used by the plant manager. Motivation (3.1) and participation (3.0), which was previously discussed, were the two dimensions farthest to the left on the leadership continuum -- approximately a democratic leadership style for these two dimensions.

Technical qualifications

The plant manager's subordinates viewed his technical qualifications in the performance of his job as rather extensive (7.5).

Action orientation

A high degree of decisiveness, hard work, enthusiasm, and responsibility toward his job characterizes the plant manager. A value of 8.1 regarding this dimension was the highest of all the twelve dimensions measured.

Problem skills

Rather extensive (7.0) reasoning, perceiving, and conceptualizing skills pertaining to problems are possessed by the plant manager.

Personal abilities and orientation

Regarding his communicating and personal inclinations, the plant manager is viewed as quite positively oriented (7.1).

By way of a summary, Figure 15, which is included in Appendix D, represents the leadership profile of the plant manager. From this summary profile, the plant manager's leadership style can be described as "general" with two important aspects -- participation and motivation -- as tending more toward a "democratic" leadership style. He is viewed as being highly competent in performing his job as the plant manager. The responses to the miscellaneous dimensions all fell near the extreme right side of the continuum.

Second Level Supervisors' Leadership Styles

Table 5 represents the average response of the second level supervisors' immediate subordinates to the leadership questionnaire. The foremen and other salaried personnel of all eight work groups in Plant A evaluated their direct superior as to his leadership characteristics along the same twelve leadership dimensions discussed in the previous section.

Representation

The supervisors of work groups 2, 3, 4 and 6 tend to represent their subordinates to higher management slightly more than the remaining supervisors. The supervisor of work group 2 exhibits the highest tendency (3.1) toward upward representation while the supervisor of work group 8 has the least tendency (5.4) to represent his subordinates to upper management.

TABLE 5

PLANT A AVERAGE RESPONSE OF FOREMEN AND OTHER SALARIED
PERSONNEL TO LEADERSHIP QUESTIONNAIRE EVALUATING
THEIR IMMEDIATE SUPERIOR'S LEADERSHIP
STYLE BY VARIABLE AND WORK GROUP

Variable	Work Group							
	1	2	3	4	5	6	7	8
<u>Leadership Dimensions</u>								
Representation	4.1	3.1	3.6	3.4	5.3	3.3	4.9	5.4
Interaction	5.1	4.9	4.2	4.8	5.0	5.1	5.9	4.2
Standards	6.7	5.5	6.7	4.2	4.8	4.8	7.7	4.8
Goal Emphasis	4.5	5.9	6.4	5.6	5.3	6.2	6.0	6.0
Participation	4.0	3.2	3.7	3.4	2.9	3.9	3.7	5.5
Direction	4.6	4.6	4.2	4.6	5.1	5.3	6.1	5.4
Rule Orientation	5.9	5.1	5.7	5.3	5.7	5.8	5.9	3.7
Motivation	4.7	3.4	2.6	3.8	3.2	4.1	4.7	4.6
<u>Miscellaneous Leadership Dimensions</u>								
Technical Qualifications	6.8	7.9	8.7	8.6	8.0	8.4	6.9	7.8
Action Orientation	7.8	8.0	8.7	7.9	6.9	7.6	8.5	7.2
Problem Skills	6.7	7.0	7.5	7.1	6.1	7.4	5.7	6.1
Personal Abilities and Orientation	7.0	7.6	8.0	7.6	6.8	7.4	8.2	6.0

Interaction

All eight work groups exhibit a combination of lateral and vertical interaction in their assessment of the supervisor. The values are grouped around the center of the interaction continuum from the lowest at 4.2 to the highest at 5.9.

Standards

The supervisors of work groups 2, 4, 5, 6 and 8 can be described as establishing moderate standards as measures of their subordinates' performance (responses of 5.5, 4.2, 4.8 and 4.8 respectively). The supervisors of groups 1 and 3 both demand the same moderate high standard level of 6.7. Work group 7 evaluated their supervisor as establishing the highest standards of all groups (7.7).

Goal emphasis

All groups, with the exception of group 1, describe their supervisor's goal emphasis as a combination group-individual, tending slightly toward individual performances (responses ranging from 5.3 to 6.4). Group 1 characterizes their supervisor as employing a combination of emphases but tending toward group goals as important.

Participation

The supervisor of group 8 is the only group leader that seeks a moderate degree of participation from his subordinates (5.5). The remaining seven supervisors all employ fairly extensive participation in arriving at decisions.

Direction

All supervisors can best be described as oriented toward the use of general direction in the manner in which they supervise their

subordinates. The supervisor of group 7 shows the highest deviation from this norm, tending toward close direction (6.1).

Rule orientation

In their attitudes toward rule adherence, the supervisors of the first seven work groups are described by their subordinates as often taking a position requiring a somewhat strict adherence to formal procedures. The responses of these seven groups are narrowing, clustered between 5.1 and 5.9. The exception, supervisor 8, is described as allowing his subordinates to deviate from established rules in the performance of their jobs.

Motivation

All supervisors tend to employ rewards to motivate their subordinates. The supervisor of group 3 uses rewards as a means to motivate to the greatest extent of all the supervisors in Plant A.

Technical qualifications

The supervisors of groups 1 and 7 are described as possessing a fairly extensive degree of technical qualifications. The remaining six supervisors are characterized by their subordinates as exhibiting a rather extensive degree of technical qualifications relevant to their job requirements.

Action orientation

All supervisors can be described as quite active in their approach to their jobs. Only one supervisor was rated below 7.0, his rating being 6.9.

Problem skills

Regarding this aspect of leadership, generally it can be said that the supervisors as a group scored lower. Supervisors 5, 7 and 8 scored below 6.2 while the remaining scored from 6.7 to 7.5.

Personal abilities and orientation

While all supervisors were evaluated as being positive in their personnel skills, the supervisor of group 8 was described as being the least oriented (6.0) toward the positive end of the measurement continuum.

Figures 16 through 23, which appear in Appendix D, pictorially present the leadership styles of each of the eight work group supervisors of Plant A. A broad description of the leadership style of Plant A's second level supervisors would be: (1) they are all employing a general style of leadership; (2) somewhat extensive participation and rewards as motivators are the two most significant factors influencing their leadership styles toward the democratic end of the continuum; (3) high standard emphasis is probably the single important factor scored toward the autocratic side of the leadership continuum; and (4) all supervisors of Plant A can be characterized as possessing a high degree of competency in carrying out their respective duties.

Behavioral Profile of Plant A

In this section the responses to thirty-three behavioral indices by the participants of Plant A are reported (see Chapter II where the indices were first presented). The indices are grouped into four broad categories: (1) individual behavior, (2) intragroup behavior: lateral relations, (3) intergroup behavior: vertical relations, and (4) intergroup behavior.

The questionnaire used to measure behavior is included as part of Appendix A with Appendix C as the key needed to unscramble the items into the four categories mentioned above.

The responses of eight second level supervisors and the average responses of foremen and other salaried personnel (the first level) in each of the eight work groups are reported and discussed. In order to facilitate the general discussion of the existing behavior in Plant A, three behavioral groupings, or types, have been arbitrarily established. The groupings are: (1) response values of 1.0 to 3.5 are designated as "negative" behavior; (2) values of 3.6 to 6.4 are described as "general" behavior; (3) all response values ranging from 6.5 to 9.0 are "positive" behavior indicators.

Summary behavioral profile figures for the tabular data are also presented in Appendix D.

Supervisors' Description of Employees' Behavior

In responding to the behavioral questionnaire the supervisors were describing the employees' behavior according to their individual perceptions. Table 6 reflects these individual attitudes by each supervisor of the eight work groups of Plant A. The discussion in this section is primarily in terms of the three types of behavior -- "negative," "general," and "positive," -- within the four broad categories of individual, intragroup lateral, intragroup vertical, and intergroup behavior.

Individual behavior

Nine indices make up the individual behavior category. It can be assumed that generally the supervisors were describing the individual

TABLE 6

PLANT A RESPONSE OF EIGHT SECOND LEVEL SUPERVISORS
TO BEHAVIOR QUESTIONNAIRE DESCRIBING EMPLOYEE
BEHAVIOR BY VARIABLE AND WORK GROUP

Variable	Work Group							
	1	2	3	4	5	6	7	8
<u>Individual Behavior</u>								
Job Involvement	3	7	5	3	5	5	3	3
Commitment to Meeting Standards .	2	7	7	4	7	9	4	7
Initiative.	3	8	7	5	5	8	3	4
Self-Improvement.	2	5	1	2	3	6	1	4
Work-Goal Commitment.	2	7	8	3	6	9	5	3
Frustration Levels.	3	3	4	5	4	7	7	6
Sense of Achievement.	3	7	6	3	4	7	5	4
Absenteeism	5	2	3	7	7	3	5	3
Turnover.	8	9	9	7	7	3	7	7
<u>Intragroup Behavior: Lateral</u>								
Confidence and Trust.	4	9	3	7	7	9	7	7
Job Related Communication	6	8	7	7	7	9	4	7
Non-Job Related Communication . .	3	3	5	5	5	7	4	3
Cooperation Patterns.	3	9	5	7	8	9	4	5
Group Unity	2	9	8	7	8	9	8	5
Interaction off the Job	3	3	7	3	4	3	2	4
<u>Intragroup Behavior: Vertical</u>								
Trust and Confidence--Downward. .	4	9	5	6	7	7	7	7
Trust and Confidence--Upward. . .	3	9	5	6	5	7	8	7
Requested Information	3	9	6	3	5	9	4	6
Communication Screening	4	9	6	7	8	9	6	6
Job Information	4	9	9	5	8	9	7	4
Human Relations Information	3	8	1	6	8	9	7	3
Cooperation and Teamwork.	4	7	8	3	4	9	3	4
Acceptance of Immediate Supervisor Decisions	3	7	9	7	8	8	6	6
Acceptance of Higher Level Management Decisions	2	7	7	6	7	7	6	5
Acceptance of Staff Group Decisions.	3	9	4	7	7	7	4	4
<u>Intergroup Behavior</u>								
Confidence and Trust.	7	9	3	5	5	9	3	6
Communications Accuracy	4	7	3	3	7	8	6	4
Communications Screening.	8	9	7	7	9	8	7	7
Informal Communications	7	2	5	5	4	7	2	3
Cooperation and Teamwork.	3	7	1	4	6	7	2	4
Team Spirit	4	9	5	4	3	9	3	6
Acceptance of Decisions	3	9	3	5	6	7	6	7
Interaction Patterns.	2	2	7	3	2	8	1	6

behavior of their immediate subordinates. These are the employees which the supervisors have the greatest amount of contact with daily.

Job involvement.--Some employee involvement in their jobs was described by supervisors 1, 4, 7 and 8, placing them in the "negative" behavior grouping. Supervisor 2 felt that considerable job involvement -- "positive" behavior -- was typical of his employees. The remaining supervisors' descriptions would fall within the "general" behavior type.

Commitment to meeting standards.--Only supervisor 1 described his employees as sometimes trying to meet or exceed established work standards (2.0 response). Five supervisors felt their employees' commitment to doing a full day's work was "positive." Two felt only a "general" behavior attitude existed.

Initiative.--Supervisors 1 and 7 responded that employees exhibit a relatively low degree of initiative, or "negative" behavior according to our grouping scheme, while three supervisors felt that "positive" behavior regarding this variable best described their employees. Three supervisors' descriptions would be in the "general" behavior grouping.

Self-improvement.--Only supervisors 2, 6 and 8 described their employees as "generally" trying to improve themselves. Five supervisors' responses indicate "negative" behavior. No supervisors indicated "positive" behavior on the part of their employees.

Work-goal commitment.--The extent that employees endeavor to meet goals was described as "positive" by supervisors 2, 3 and 6. The responses by supervisors 1, 4 and 8 place the employees' behavior in

the "negative" grouping. The remaining two descriptions are "general" types.

Frustration levels.--Employees in work groups 1 and 2 were described by their supervisors as usually possessing a feeling of frustration in performing their jobs--"negative" behavior according to our scheme of classification. A lower degree of frustration was experienced in the "positive" behavior of groups 6 and 7 while the remaining four work groups can be typed as "general" behavior.

Sense of achievement.--"Negative" behavior can be ascribed to work groups 1 and 4 regarding this variable while the relatively higher degree of employee satisfaction out of doing a good job, evidenced in groups 3, 5, 7 and 8, are examples of "general" behavior. Only supervisors 2 and 6 felt their employees' behavior was such to allow their inclusion in the "positive" behavior grouping.

Absenteeism.--Job attendance was felt to have an unstable effect on operations in groups 2, 3, 6 and 8 resulting in "negative" behavior. The extent that sometimes absenteeism affected operations, as responded by supervisors 4 and 5, indicated a "positive" behavior orientation. The responses of supervisors 1 and 7 were a "general" behavior indicator.

Turnover.--Only the supervisor of group 6 felt that employee continuity usually affected operations. The remaining seven supervisors expressed the attitude that sometimes or rarely did turnover affect their operations--a "positive behavior reply.

Summarizing the responses to the individual behavior questions made by the eight supervisors, supervisor 1 expressed the highest

degree of "negative" orientation on the part of his employees while the supervisor of group 2 responded with the most "positive" indicators of individual behavior.

Intragroup behavior: lateral relations

Six indices comprise the lateral intragroup behavior category. The supervisors are describing the lateral relations which they perceive to exist within their work groups by responding to the questionnaire items.

Confidence and trust.--All supervisors, with the exception of supervisor 1 who expressed "general" behavior and supervisor 3 who expressed "negative" behavior, felt that members of their work groups have a high degree of confidence and trust in each other.

Job related communication.--"General" behavior regarding job related discussions can be attributed to work groups 1 and 7, while the remaining seven groups are best described by the supervisors as "positive" behavior indicators.

Non-job related communications.--Low degrees of non-job related discussions take place within groups 1, 2 and 8. "General" behavior describes groups 3, 4, 5 and 7. Only group 6 exhibits "positive" behavior.

Cooperation patterns.--"Negative" behavior is indicated by supervisor 1 for his work group in the extent of cooperation and assistance among co-workers. Work groups 2, 4, 5 and 6 are "positive" in their behavior.

Group unity.--The supervisor of group 1 again has his response falling within the "negative" behavior grouping. Six supervisors are of the attitude that "positive" behavior regarding intragroup unity exists while only one supervisor's reply lies within the "general" type of behavior grouping.

Interaction off the job.--Informal interactions off the job are described as "positive" for group 3, "general" for groups 5 and 8, and "negative" for the remaining five work groups.

Summarizing the responses to the lateral intragroup behavior questions, supervisor 1 had the highest number of "negative" behavior indicators (4) while supervisor 6 had the most "positive" replies (5).

Intragroup behavior: vertical relations

Ten indices are included in this category of behavior. The eight supervisors' responses are their perceptions regarding the vertical relations that exist, primarily between superiors and subordinates, within their work groups.

Trust and confidence downward.--Supervisors of work groups 5, 6, 7 and 8 all felt that usually supervisors have trust and confidence in subordinates (all responses were 7) and the supervisor of group 2 felt that this almost always was the case (a 9 response). All five groups are in the "positive" behavior grouping. Groups 1, 3 and 4 possess "general" behavior orientation. No supervisor replied in the manner to allow the response to be termed "negative" behavior.

Requested information.--Sometimes employees provide accurate and complete information requested by supervisors in groups 1 and 4, a

"negative" behavior aspect. "Often" is the situation in groups 3, 5, 7 and 8, or "general" behavior. And "almost always" is the situation in the "positive" oriented groups 2 and 6.

Communication screening.--Half the work groups can be described as "general" and the other four as "positive" behavior vis-à-vis the situation that exists within the work groups on volunteering job-related information upward to superiors.

Job information.--"Usually" or "almost always" do subordinates bring job problems to the attention is the view of the supervisors of work groups 2, 3, 5, 6 and 7. A "positive" behavior indicator. The remaining work groups can be classified as possessing "general" behavior.

Human relations information.--The supervisor of work group 3 felt that rarely do his subordinates bring to his attention human relations problems (a response of 1). The supervisors of groups 1 and 8 also had a "negative" description of their groups but to a lesser extent (both responses were 3). Groups 2, 5, 6 and 7 possessed "positive" orientation while group 4 was described as "general" behavior.

Cooperation and teamwork.--The sense of teamwork and cooperation between subordinates and superiors within work groups 4 and 7 was described as only sometimes existing--a "negative" behavior aspect. Three supervisors responded "generally" (each response was 3), and supervisors of groups 2, 3 and 6 each responded "positively" (responses of 7, 8 and 9 respectively).

Acceptance of immediate supervisor decisions.--Only the supervisor of group 1 responded "negatively" (3) to this variable. "Usual" to

"very often" acceptance of their decisions by subordinates was the case described by the supervisors of groups 2, 3, 4, 5 and 6. Supervisors 7 and 8 responded in the "general" behavior grouping.

Acceptance of higher level management decisions.--The supervisor of work group 1 felt that his group members had a "negative" behavior toward acceptance of higher management decisions while groups 2, 3, 5 and 6 can best be described as "positive" behavior oriented. Groups 4, 7 and 8 fall within the "general" behavior grouping.

Acceptance of staff group decisions.--This last variable in the broad category of intragroup vertical behavior has a similar pattern response to the preceding variable. Again, the supervisor of work group 1 describes his group as possessing "negative" behavior. Groups 2, 4 and 6 are "positively" oriented while groups 3, 7 and 8 lie within the "general" behavior grouping.

Summarizing the supervisors' responses to the vertical intragroup behavior category we find that supervisor 1 again had the highest number of "negative" responses (6) with supervisors 2 and 6 tying for the most "positive" responses with ten each.

Intergroup behavior

Eight variables comprise this last major category of behavior. The supervisors are expressing their attitudes vis-à-vis the relations that exist between their work groups and other groups within the plant.

Confidence and trust.--"Positive" behavior is exhibited by work groups 1, 2 and 6 according to the supervisors' perceptions. Groups 4, 5 and 8 are "general" behavior types while the two remaining groups,

3 and 7, are characterized as being "negative" behaviorally oriented in the extent of trust and confidence which exists between work groups.

Communications accuracy.--The accuracy and completeness of inter-group communications was described as being "negative" by supervisors 3 and 4, "general" by 1, 7 and 8, and "positive" by 2, 5 and 6.

Communications screening.--All supervisors felt that only "sometimes" or "rarely" does important job information get restricted or screened between work groups. The result was a unanimous "positive" behavior type for the eight work groups.

Informal communications.--Non-job-related discussions were rated as "negative" by supervisors 2, 7 and 8, as "general" by supervisors 3, 4 and 5, and "positive" by 1 and 6.

Cooperation and teamwork.--Only supervisor 2 felt that "positive" behavior was exhibited by his group members regarding the degree of voluntary cooperation and teamwork between various groups. Supervisors 1, 3 and 7 had a "negative" attitude response to the same question while 4, 5 and 8 responded in a manner to place their work groups in the "general" behavior grouping.

Team spirit.--Team spirit exists almost always among the various groups. This was the attitude expressed by supervisors 2 and 6. A response of 3 by supervisors 5 and 7 placed their work groups in the "negative" grouping. The remaining four groups can be classified as "general" behavior types.

Acceptance of decisions.--Work groups 1 and 3 are described by their supervisors as being "negative" in their acceptance of decisions made by other work groups. Supervisors 2, 6 and 8 express a "positive" behavior indicated by their employees and the remaining groups -- 4, 5 and 7 -- are "general" behavior types.

Interaction patterns.--In responding to this last variable in the intergroup behavior category, and the last variable in the behavioral part of the model, responses were similar to the intragroup lateral behavior question about interaction off the job. Five supervisors were of the opinion that "rarely," or "sometimes," do employees informally meet aside from company sponsored events. Supervisors of groups 3 and 6 expressed a "positive" behavior on the part of their employees. Only group 8 was described as fitting the "general" behavior type.

In summary, the supervisor of work group 7 expressed the most "negative" behavior aspects while group 6 was the most "positive" oriented regarding intergroup behavior. Groups 4 and 8 both had the greatest number of "general" behavior aspects within this broad category.

Figures 24 through 31, which appear in Appendix D, represent the behavioral profiles of the eight second level supervisors' responses describing their work groups. The data from Table 6 are plotted to provide the profiles.

Foremen and Other Salaried Personnel's Description of Employees' Behavior

The responses of the foremen and other salaried personnel to the behavioral questionnaire represent their perceptions regarding the various aspects of employee behavior. Table 7 reports the average responses of these groups of employees. The discussion in this section parallels that of the preceding one.

TABLE 7

PLANT A AVERAGE RESPONSE OF FOREMEN AND OTHER SALARIED
PERSONNEL TO BEHAVIOR QUESTIONNAIRE DESCRIBING
EMPLOYEE BEHAVIOR BY VARIABLE AND WORK GROUP

Variable	Work Group							
	1	2	3	4	5	6	7	8
<u>Individual Behavior</u>								
Job Involvement.	5.8	4.8	5.8	5.3	7.5	6.2	5.0	5.5
Commitment to Meeting Standards	5.8	5.4	5.2	5.2	8.0	5.8	4.0	3.5
Initiative	7.0	6.6	5.2	5.2	7.5	7.2	5.0	5.5
Self-Improvement	3.6	5.0	4.8	4.5	5.0	6.8	2.0	3.5
Work-Goal Commitment	5.8	6.8	4.8	5.3	7.5	5.5	4.3	5.0
Frustration Levels	5.6	6.4	7.0	6.0	7.0	7.5	6.3	6.0
Sense of Achievement	7.6	5.8	6.2	5.2	7.5	6.8	5.0	6.5
Absenteeism.	3.2	3.4	2.5	4.2	8.0	5.2	3.7	6.0
Turnover	6.0	6.8	6.5	6.5	7.5	8.5	6.7	8.0
<u>Intragroup Behavior: Lateral</u>								
Confidence and Trust	6.8	5.8	7.0	6.8	7.5	6.5	5.7	8.0
Job Related Communication. . .	6.4	7.2	5.5	8.0	7.0	5.0	5.3	8.0
Non-Job Related Communication.	5.0	6.6	4.2	6.0	6.0	4.8	5.3	5.5
Cooperation Patterns	6.4	6.2	4.2	6.5	6.0	5.8	4.3	6.5
Group Unity.	7.0	8.2	6.8	6.2	7.5	6.5	5.3	7.0
Interaction off the Job. . . .	4.6	2.2	2.8	2.7	2.0	5.8	3.0	4.0
<u>Intragroup Behavior: Vertical</u>								
Trust and Confidence--Downward	5.0	6.2	8.0	6.5	7.5	6.8	7.7	7.0
Trust and Confidence--Upward .	7.2	6.6	6.5	5.8	7.5	4.8	4.7	7.0
Requested Information.	6.6	6.4	3.5	7.5	7.5	7.0	4.7	7.5
Communication Screening. . . .	6.2	5.8	6.5	7.8	8.0	7.5	5.0	8.0
Job Information.	7.4	7.8	7.8	6.8	8.0	8.8	7.0	8.0
Human Relations Information. .	5.6	5.0	5.0	5.5	5.5	5.5	4.7	6.0
Cooperation and Teamwork. . . .	7.0	6.2	6.0	5.8	7.0	6.8	4.3	6.5
Acceptance of Immediate Supervisor Decisions.	6.4	7.0	6.5	7.3	8.0	8.0	6.7	7.0
Acceptance of Higher Level Management Decisions.	6.2	6.6	6.2	5.0	8.0	6.0	3.7	7.0
Acceptance of Staff Group Decisions	7.0	7.0	6.2	7.0	8.0	7.8	4.7	7.0
<u>Intergroup Behavior</u>								
Confidence and Trust	6.2	5.2	6.8	5.8	6.0	8.8	3.7	7.0
Communications Accuracy. . . .	6.0	6.4	4.8	6.3	6.0	8.2	4.7	7.5
Communications Screening	7.4	7.4	7.2	8.5	8.0	7.2	6.3	8.5
Informal Communications.	5.4	5.6	4.8	5.0	4.5	3.2	4.0	3.5
Cooperation and Teamwork	5.8	4.8	5.8	5.5	7.5	6.2	5.3	5.5
Team Spirit.	6.6	4.4	6.0	5.2	4.5	6.2	7.0	7.0
Acceptance of Decisions.	5.2	5.8	4.0	5.0	6.5	6.5	4.7	6.5
Interaction Pattenrs	5.0	4.2	2.0	2.3	2.5	1.7	1.7	4.5

Individual behavior

Job involvement.--Work group 5 was the only group that responded "positive" regarding this variable--the remaining work groups all exhibit a "general" behavior orientation.

Commitment to meeting standards.--Group 8 felt that only sometimes employees do a full day's work -- a "negative" response -- and work group 5 responded in the opposite direction in that they felt employees usually do a full day's work -- a "positive" reply. The remaining work groups fell within the "general" behavior area.

Initiative.--The degree of job initiative shown by employees was described as moderate by work groups 3, 4, 7 and 8, placing these groups in "general" behavior. The remaining work groups felt the employees have shown considerable amounts of initiative, thus placing these groups in the "positive" behavior end of the continuum.

Self-improvement.--Two work groups (7 and 8) replied "negatively" regarding this variable. One group (6) felt that considerable attempts at self-improvement were evidenced, thus a "positive" position, and the remaining work groups fell within the "general" behavior descriptive grouping.

Work-goal commitment.--The typical viewpoint of the work groups was that often employees are willing to change the work pace to meet goals (six of the eight groups replied in this fashion). Their behavior can be described as "general." Groups 2 and 5 responded in the "positive" direction. No group fell within the "negative" behavior grouping.

Frustration levels.--The feeling of frustration was described as occurring often by work groups 1, 2, 4, 7 and 8, placing these groups in "general" behavior. On the other hand, work groups 3, 5 and 6 would be in the "positive" behavior grouping. No group responded negatively.

Sense of achievement.--Four work groups felt that the employees often got satisfaction out of doing a good job. This "general" behavior was mentioned by groups 2, 3, 4 and 7. The remaining four groups responded "positive," i.e., response values from 6.5 to 7.6 placing these groups on the right side of the behavior continuum.

Absenteeism.--The first three groups responded "negative" in that they felt absenteeism usually affected the operation of the plant. Four work groups have a "general" behavior orientation and only one group, regarding this variable, could be described as "positive." This was work group 5 with a response of 8.0.

Turnover.--Only work group 1 felt that turnover very often affected the operation of the plant ("general" behavior). The remaining seven work groups responded that sometimes to rarely did the question of employee continuity become important. Therefore, seven of the eight work groups were "positive" behavior oriented according to our classification scheme.

Intragroup behavior: lateral relations

Confidence and trust.--Work groups 2 and 7 replied that their work group members often have confidence and trust in each other -- "general" behavior. The remaining six groups expressed a "positive" behavior in that they replied that the situation ranged from "usually" to "almost always" one of exhibiting intragroup confidence and trust.

Job related communication.--The work groups were evenly split between "general" and "positive" behavior orientation when it comes to this variable, the lowest response being 5.0 by work group 6 and the highest "positive" response of 8.0 being made by groups 4 and 8.

Non-job related communication.--All work groups responded in "general" behavior terms with the exception of group 2's response value of 6.6 placing themselves in the "positive" behavior grouping.

Cooperation patterns.--For work groups 4 and 8 there exists a usual amount of cooperation among the groups' co-workers, placing these two groups in the "positive" behavior position. The remaining groups described the degree of cooperation as existing "often" (a 4.2 response by group 3 representing the lowest value) to one of "very often" being the case -- a "general" behavior reply.

Group unity.--A high degree of work group member unity exists in six work groups. Groups 4 and 7 exhibit a relatively lower degree of unity, a "general" behavior orientation, than the six other groups which can be depicted as "positive" behavior.

Interaction off the job.--Only sometimes do employees meet informally off the job according to the responses of five work groups. These replies place the five groups in the "negative" behavior end of the continuum. Three work groups, 1, 6 and 8, responded in a "general" behavior orientation while no group responded in a manner to place them in the "positive" grouping.

Intragroup behavior: vertical relations

Trust and confidence downward.--Work groups 1 and 2 express a "general" behavior attitude in that they felt supervisors often have trust and confidence in subordinates. The other six work groups responded in a more "positive" behavior attitude vis-à-vis this variable.

Trust and confidence upward.--The degree of trust and confidence shown by subordinates in their superiors was described by work groups 4, 6 and 7 in terms of a "general" behavior pattern. The other five work groups expressed a higher degree of trust being the case. These groups would fall within the "positive" grouping.

Requested information.--Work group 3's average response indicates a "negative" behavior orientation in that they felt employees only sometimes provided accurate requested data to supervisors. Groups 2 and 7 replied that often this was the case -- "general" behavior -- while the remaining five work groups'¹ replies would have to be depicted as "positive" behavior indicators.

Communication screening.--The extent of intentional withholding and distortion of information by subordinates is described as existing often by work groups 1, 2 and 7. The situation is one of "sometimes" to "rarely" existing as expressed by the remaining five work groups that lie within the "positive" portion of the behavior continuum

¹ Within the category of intragroup behavior: vertical relations, work group 3's response to this variable is the only "negative" behavior indicator expressed by the eight work groups to the ten variables comprising the category.

Job information.-- In evaluating whether subordinates bring job problems to the attention of their supervisors, all eight work groups fall within the "positive" behavior area.

Human relations information.--"General" behavior characterizes all work groups vis-à-vis this variable. The subordinates' volunteering human relations information was described as "often" being the case.

Cooperation and teamwork.--Half the work groups responded in a "general" behavior way while the remaining four would have to be placed in the "positive" behavior grouping regarding the degree that cooperation and teamwork exists between supervisors and subordinates.

Acceptance of immediate supervisor decisions.--Work group 1's average response of 6.4 places it in the "general" behavior grouping, while the other seven work groups responded in a manner to allow their placement in the "positive" behavior area.

Acceptance of higher level management decisions.--Five work groups can be described as possessing a "general" behavior attitude towards this variable while the remaining three work groups' responses place them in the "positive" behavior grouping.

Acceptance of staff group decisions.--Work groups 3 and 7 responded 6.2 and 4.7 respectively to this variable -- a "general" behavior attitude -- while the remaining work groups expressed that employees usually accepted decisions of staff groups. Such responses place these groups in the "positive" area of the behavior continuum.

Intergroup behavior

Confidence and trust.--All degree of intergroup confidence and trust that was described ranged from work group 7's "sometimes" existing (a 3.7 response) to "almost always" being the case as expressed by work group 6 (8.8 response). Following the grouping classification which we are using, work groups 1, 2, 4, 5 and 7 would be "general" behavior while groups 3, 6 and 8 are "positive" behavior oriented.

Communications accuracy.--Work groups 6 and 8 expressed a "positive" behavior attitude regarding the accuracy and completeness of intergroup information exchange, while the remaining work groups would be classified as "general" behavior.

Communications screening.--Only one work group -- group 7 -- expressed other than a "positive" behavior perception vis-à-vis the extent that there exists job related information restriction. Work group 7 would be classed as "general" behavior.

Informal communications.--"Negative" behavior was indicated by work groups 6 and 8. Six work groups felt that often informal discussions took place between departments but only to the extent to place these groups in the "general" behavior grouping.

Cooperation and teamwork.--Work group 5 perceived a relatively high degree of cooperation and teamwork (7.5) between departments with the remaining groups falling slightly lower into the "general" behavior area.

Team spirit.--The responses of work groups 1, 7 and 8 (6.6, 7.0 and 7.0 respectively) place them in the "positive" grouping while the

other five groups' "general" behavior responses indicate a lower attitude orientation regarding the extent of intergroup team spirit.

Acceptance of decisions.--"Usually" ("positive" behavior) work groups 5, 6 and 8 accept other groups' decisions. "General" behavior best describes the other groups' orientation toward this variable of intergroup behavior.

Interaction patterns.--This last variable in the category and also the last of the total behavioral indices that were measured had five responses in the "negative" grouping. The low degree of intergroup informal interaction was expressed by groups 3 and 7. Work groups 1, 2 and 8 would be in the "general" area of the behavior continuum.

Figures 32 through 39, included in Appendix D, pictorially portray the behavior patterns of the eight work groups based upon the average responses reported in Table 7.

Chapter VI will describe in general terms the contrasts in structure, leadership, and behavior of Plants A, B and C. The next chapter will describe Plant B following the same format as was used in the present chapter.

CHAPTER IV

DATA DESCRIPTION OF PLANT B

Introduction

The description of Plant B based upon the data collected is presented in this chapter. Plant B is described in terms of the primary structural, mediating structural, leadership, and behavioral factors that existed during the study. The glossary which follows the final chapter provides the necessary definitions and operational measures of the structural and leadership variables. The tabular data are augmented by summary profiles depicting the responses to the various variables.

Plant B is structured into six departments, or work groups, and basically two management levels -- the foremen and the supervisory levels. A total of twenty-one supervisors, foremen, and other salaried personnel comprised the research study population. The plant manager is not included in the study as a respondent although his leadership style was described by his subordinates. Figure 5 depicts the organization structure of Plant B. The supervisor of work group 6 participated in the study by responding to the structural and leadership questionnaires. Since the study was confined to management and other salaried personnel, description of the leadership style of supervisor 6 and his perceptions regarding the behavioral factors existing within his work group was not in keeping with the research design.

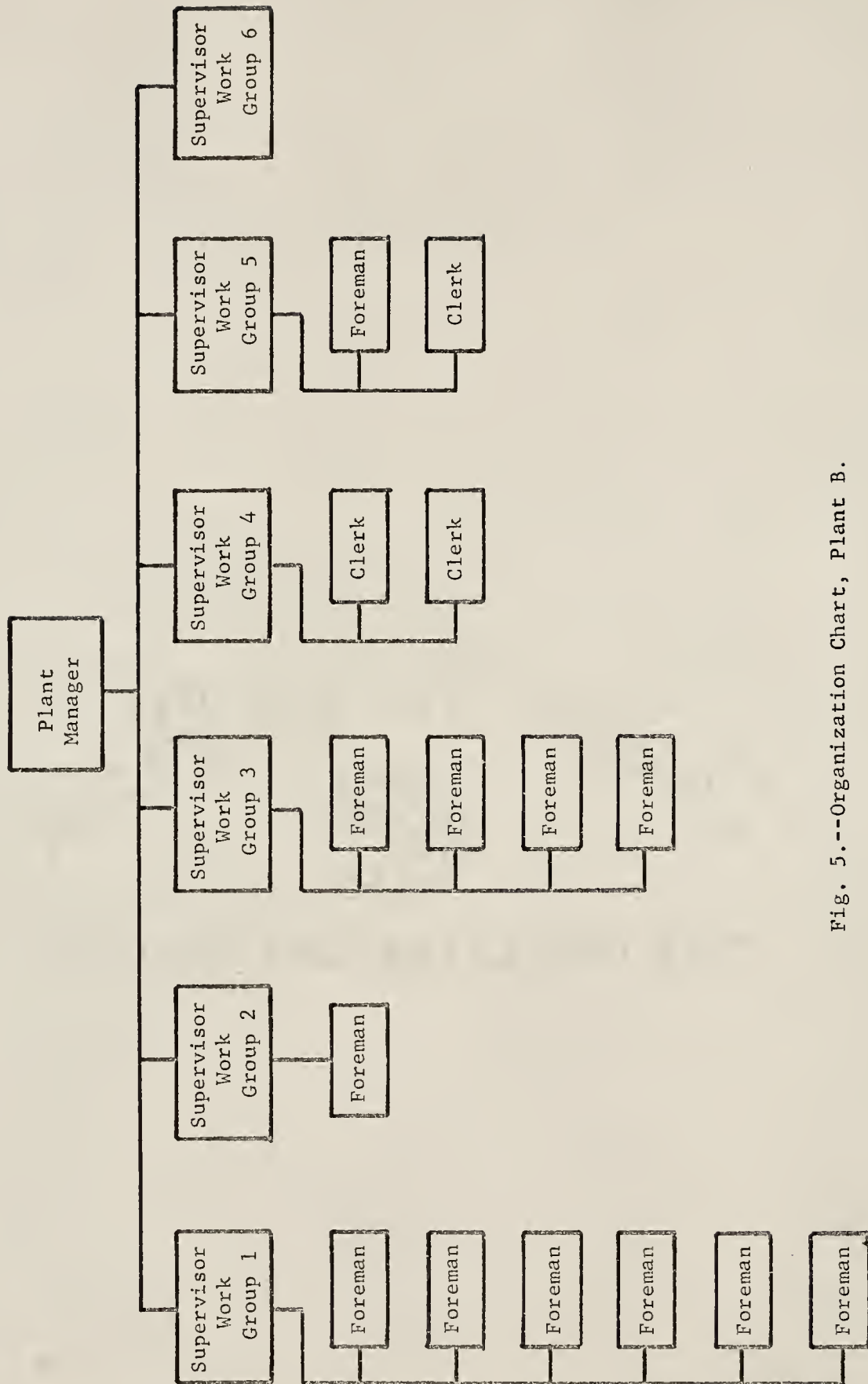


Fig. 5.--Organization Chart, Plant B.

Primary Structural Variables of Plant B

Size, work flow, spatial-physical-temporal factors, work demands, and heuristics comprise the primary structural variables that are described in this section. Table 8 represents the average responses to the questionnaire items covering primary structural elements of Plant B.

Size

Work group 1, with two levels, is the largest of the six departments in the plant. Although it is larger than the other work groups all six groups can be described as small in size.

Work Flow

The extent of input-output relationships that exist within and among the work groups can be described in terms of a continuum ranging from non-integrated to integrated work flow.

Intragroup work flow

Work group 4 has the least work flow integration of the six work groups (a 4.2 response). Its members are moderately unrelated to each other as far as the work flow existing within their group is concerned. The remaining five groups are best described as having partial integration of work flows within their respective departments.

Intergroup work flow

Data were collected for only the important intergroup relations existing with Plant B. These were established during the initial observation and interview sessions prior to data collection. The elimination of responses from the least important relationships resulted in the empty cells of Table 8.

TABLE 8
PLANT B AVERAGE RESPONSE TO PRIMARY
STRUCTURAL QUESTIONNAIRE ITEMS BY
VARIABLE AND WORK GROUP

Variable	Work Group					
	1	2	3	4	5	6
Size ^a	3	1	2	1	1	2
Work Flow:						
Intragroup	5.6	6.0	5.2	4.2	6.1	6.0
Intergroup:						
Work Group 1	---	---	5.7	---	6.1	6.2
" " 2	7.0	---	---	---	6.3	---
" " 3	6.6	---	---	---	6.1	5.9
" " 4	6.3	---	6.4	---	5.2	5.4
" " 5	6.4	6.6	---	---	---	---
" " 6	5.7	---	5.3	---	---	---
S-P-T Factors:						
Intragroup	6.5	5.0	4.3	4.1	4.0	7.0
Intergroup:						
Work Group 1	---	---	6.7	---	7.5	7.9
" " 2	5.5	---	---	---	7.2	---
" " 3	5.5	---	---	---	5.8	5.7
" " 4	7.9	---	3.8	---	6.3	7.3
" " 5	7.3	8.1	---	---	---	---
" " 6	8.0	---	6.7	---	---	---
Work Demands	4.1	3.2	5.4	5.0	5.4	5.0
Heuristics	2.8	4.0	2.5	2.0	1.7	3.5

^aThe size average responses are arrived at by using Table 23, which appears in the glossary.

The degree of work flow integration is highest between groups 2 and 1 -- a partially integrated intergroup work flow (7.0), and the work flow relations between groups 4 and 5 is the lowest at 5.2 -- only moderately integrated. Considering the extent of intergroup work flow for all departments within Plant B, it can be said that partial integration of the work flows exists in the plant.

Spatial-Physical-Temporal Factors

The work groups' concentration or dispersement were measured for intra- and intergroup relations.

Intragroup s-p-t factors

The members of groups 1 and 6 are fairly dispersed from each other (responses 6.5 and 7.0 respectively). Groups 2 through 5 can best be described as moderately concentrated within their groups.

Intergroup s-p-t factors

Work groups 1, 5 and 6 are fairly dispersed from the other groups for which data were obtained. Group 3 exhibits the least total degree of separation from the other groups. Work group 5's separation from group 2 is the highest at 8.1, while the lowest degree of separation is between groups 4 and 3 at 3.8 -- fairly concentrated.

Overall, with the exception of groups 3 and 4 and their relations with each other, Plant B can be described as having fairly dispersed departments.

Work Demands

The work demands of groups 1 and 2 are considerably stable from week to week. The remaining four groups exhibit less stability but still about half the time have work demands that are stable.

Heuristics

The last variable to be described in the major category of primary structural is heuristics -- the extent one is able to predict the outcome of actions or decisions. All work groups in Plant B have their actions or decisions predictable to a great extent. Group 5 has the greatest degree of predictability (1.7), while Group 2 the least at 4.0.

Figures 40 through 45 (see Appendix E) summarize the data from Table 8 in a profile for each of the work groups. The mediating structural variables, which will be discussed in the next section, are also included in Figures 40 through 45.

Mediating Structural Variables of Plant B

Formal authority relationships, control system, and information system are the elements of the mediating structural variables. Data obtained for the sub-variables of formal authority are reported but the discussion is in terms of the main variable. Table 9 reports the average responses to the questionnaire by the work groups of Plant B.

Formal Authority

The formal authority relationships that exist for all work groups are largely unspecified -- or fairly diffuse. The response values ranged from a low of 3.5 (group 6) to a high of 4.1 (groups 1 and 5).

Control System

The formal system for evaluating performance may range from an institutional type -- no formal specifications established -- to one where a formal individual performance measuring system exists. Work

groups 2, 5 and 6 have a fairly well defined individual control system. Groups 1, 3 and 4 can be characterized as possessing a partially defined system to control members' performance with only group 4 tending toward an institutional system (response of 4.2) where the standards, measuring instruments, and the allocation of rewards-penalties are less clearly established.

TABLE 9
PLANT B AVERAGE RESPONSE TO MEDIATING
STRUCTURAL QUESTIONNAIRE ITEMS BY
VARIABLE AND WORK GROUP

Variable	Work Group					
	1	2	3	4	5	6
Formal Authority:	4.1	3.6	3.8	3.7	4.1	3.5
Delegation	3.7	2.0	3.2	3.8	4.8	3.5
Levels	3.1	3.5	3.1	3.2	3.7	4.0
Departmentation	5.4	5.2	5.1	4.0	3.8	3.0
Control System	5.8	6.5	5.1	4.2	6.9	6.7
Information System:						
Intragroup	5.5	5.2	5.6	5.8	5.4	4.8
Intergroup	5.2	4.4	5.4	5.4	6.0	2.0
Vertical	6.0	5.2	5.6	5.3	4.9	4.4

Information System

The information system -- the formal network of receiving and transmitting centers and the communication relationships -- for Plant B will be discussed from the standpoint of three relationships: (1) intra-group, (2) intergroup, and (3) vertical.

Intragroup information system

The six work groups of Plant B can all be described as possessing some aspects of an unrationalized informal intragroup information system as well as a formal rationalized one. The values ranged across the center of the continuum from 4.8 to 5.8.

Intergroup information system

The intergroup information system was described as a combination simple/complex system by groups 1 through 5. Group 6 can be described as having a simple information system--little or no formal methods to handle intergroup information.

Vertical information system

The vertical system which exists within Plant B is also a combination simple/complex system. Excluding group 6, all work groups have basically similar intragroup, intergroup, and vertical information systems.

Figures 40 through 45 (included in Appendix E) depict the similarities and differences that exist in the primary and mediating structural variables for Plant B.

Leadership Dimensions of Plant B

The leadership styles of the plant manager and five second level supervisors are described in this section. The discussion is based upon the responses of the immediate subordinates to the leadership questionnaire which measures the same twelve dimensions of leadership that were presented in the previous chapter.

Figures representing the leadership profiles of the supervisors and the profile of the plant manager are included in Appendix E.

Plant Manager's Leadership Style

Table 10 reports the average responses of six supervisors to the leadership questionnaire directed at evaluating the plant manager. The leadership style of the plant manager is described using the twelve dimensions of leadership.

Representation

The six supervisors' perception of the plant manager is that he usually promotes the interests of the supervisors to higher management. The average response of 3.0 is on the democratic end of the leadership continuum.

Interaction

Generally the plant manager encourages supervisors to meet together to work out common problems more than encouraging interaction with himself. His orientation is toward lateral interaction among the supervisors.

Standards

Typically, the plant manager allows the supervisors to set their own performance standards while at the same time he emphasizes the need to establish relatively high standards. The supervisors' perception is that moderately low (a response of 3.7) standards are encouraged.

Goal emphasis

The plant manager is perceived as being oriented toward placing responsibility for getting a job done on the group as opposed to individuals. The average response of 4.1 by the six supervisors is descriptive of a "general" leadership style.

TABLE 10

PLANT B AVERAGE RESPONSE OF SIX SECOND LEVEL SUPERVISORS
TO LEADERSHIP QUESTIONNAIRE EVALUATING THE PLANT
MANAGER'S LEADERSHIP STYLE BY VARIABLE

Variable	Average Response
<u>Leadership Dimensions</u>	
Representation.	3.0
Interaction	3.8
Standards	3.7
Goal Emphasis	4.1
Participation	3.9
Direction	4.0
Rule Orientation.	5.1
Motivation.	4.3
<u>Miscellaneous Leadership Dimensions</u>	
Technical Qualifications.	7.4
Action Orientation.	6.8
Problem Skills.	5.8
Personal Abilities and Orientation.	7.3

Participation

Usually the plant manager solicits comments and suggestions from the supervisors on job related matters. They view him as encouraging open discussion and participation regarding common problems -- a response of 3.9 indicating rather extensive use of participation.

Direction

The plant manager is perceived as utilizing general direction (4.0). He more or less allows the supervisors to handle their own problems with only occasional direction and guidance.

Rule orientation

Generally, the plant manager stresses the necessity of adhering to policies, procedures, and rules but still allows for a certain degree of flexibility and personal judgment.

Motivation

Basically the plant manager relies upon the use of rewards to motivate the supervisors instead of the threat of punishment. A response of 4.3 doesn't indicate a high degree of rewards emphasis but does point out the orientation toward rewards and away from punishments as a motivator.

Technical qualifications

Rather extensive technical qualifications are possessed by the plant manager (7.4). His professional training, work experience, and technical know-how result in a high degree of competency.

Action orientation

While the plant manager is described as being quite active in the manner in which he handles his job, the supervisors' perception

is that he possesses only a moderately high degree of competency (6.8).

Problem skills

The reasoning skills, conceptual ability, innovativeness, and comprehension of the plant manager were rated the lowest (5.7) of the four miscellaneous leadership dimensions. The responses indicate a moderate competency level.

Personal abilities and orientation

The supervisors responded to seven questionnaire items in evaluating this aspect of the plant manager's leadership style. The average response value of 7.3 indicates a positive orientation resulting in a high competency level.

Figure 46 (included as a part of Appendix E) represents the leadership profile of the plant manager based upon the average responses of the six supervisors reported in Table 10. From this summary profile, the plant manager's leadership style can be described as: (1) "democratic" for only one dimension -- representation; (2) a "general" leadership style with a definite tendency toward the "democratic" end of the continuum for the remaining seven dimensions in the leadership functions area; and (3) his competency is viewed as mostly on the low end of the "high competency" area with the level of problem skills described as equating to a "moderate" degree of competency.

Supervisors' Leadership Styles

Table 11 reports the average responses of the foremen and other salaried personnel to the leadership questionnaire evaluating their immediate superior. Only five work group supervisors were evaluated.

TABLE 11

PLANT B AVERAGE RESPONSE OF FOREMEN AND OTHER SALARIED
PERSONNEL TO LEADERSHIP QUESTIONNAIRE EVALUATING
THEIR IMMEDIATE SUPERIOR'S LEADERSHIP STYLE
BY VARIABLE AND WORK GROUP

Variable	Work Group				
	1	2 ^a	3	4	5
<u>Leadership Dimensions</u>					
Representation	4.4	3.6	5.3	3.6	5.9
Interaction	4.9	5.5	4.9	5.2	6.3
Standards	5.5	5.3	4.4	4.5	3.5
Goal Emphasis	5.7	8.0	4.8	5.5	4.8
Participation	3.3	5.0	5.4	4.3	5.2
Direction	5.0	4.8	5.3	5.2	5.3
Rule Orientation	5.4	5.7	4.5	5.2	4.8
Motivation	4.2	3.7	6.0	4.0	5.2
<u>Miscellaneous Leadership Dimensions</u>					
Technical Qualifications	7.1	9.0	4.4	8.5	8.2
Action Orientation	7.0	8.1	4.8	7.0	7.2
Problem Skills	7.0	7.4	5.0	7.9	6.4
Personal Abilities and Orientation	6.7	7.4	5.0	7.6	7.3

^aResponses in work group 2 are based upon one foreman's evaluation.

The supervisor of work group 6 was responsible for hourly workers only. Since the study included management and salaried personnel, evaluation of the leadership style of supervisor 6 was not possible.

The discussion in this section is in terms of the same twelve leadership dimensions. Leadership profiles for the five supervisors are included in Appendix E.

Representation

The supervisors of work groups 3 and 5 often have a tendency to act as spokesmen and buffers for higher management vis-à-vis their subordinates in the department. This is also true for supervisor 1, but to a lesser degree, whereas supervisors 2 and 4 are described as usually representing their subordinates to higher management.

Interaction

The subordinates' responses to the interaction questions indicate that supervisors 1 through 4 employ a combination of lateral/vertical personal interaction. Supervisor 5 is more nearly oriented toward encouraging vertical interaction within his work group (a response of 6.3).

Standards

Supervisor 5 is described as establishing moderately low standards for his group (3.5), while the remaining four supervisors are depicted as employing and emphasizing moderate standards.

Goal emphasis

Only supervisor 2 is described as emphasizing a high degree of individual performance and competition (8.0), the first instance of an

"autocratic" leadership style. The other work groups describe their superiors as encouraging a combination of group and individual goals. The values ranged across the center of the measurement continuum from 4.8 to 5.7 -- or a "general" leadership style.

Participation

Supervisor 1 employs rather extensive participation in arriving at a decision (3.3). The remaining supervisors are perceived as being somewhat selective in the extent to which they allow subordinates to participate in the decision process.

Direction

All five supervisors are described by their subordinates as employing "general" direction in exercising their leadership functions.

Rule orientation

The subordinates of each of the five work groups expressed the attitude that their supervisor at times allowed some personal judgment and flexibility regarding adherence to rules while at other times he emphasized a stricter following of the formal policies, procedures, and rules. The responses, as Table 11 indicates, are clustered around the center of the continuum from 4.5 to 5.7.

Motivation

The supervisor of group 2 uses rewards to motivate subordinates to a greater extent than other supervisors. Supervisor 3 was described as tending to emphasize penalties (6.0 response) in motivating employees. Although all five supervisors employ a "general" leadership style, some lean toward either rewards (supervisors 1, 2 and 4 with response values

4.2, 3.7, and 4.0 respectively) or punishment (supervisor 3 and 5 with responses of 6.0 and 5.2) as means to motivate their subordinates.

Technical qualifications

Professional training, work experience, and technical know-how were described as very extensive for supervisors 2 (a 9.0 response), 4 (8.5), and 5 (8.2). Work group 1 described their supervisor as possessing a moderately high degree of competency (7.1), while supervisor 3 was described by his subordinates as only moderately competent regarding technical qualifications associated with the leadership function (a 4.4 response).

Action orientation

The average responses of the subordinates of supervisor 3 to the questions that described his approach to his job, i.e., his handling of decisions and emergencies, work commitment, enthusiasm, drive, etc., indicated a very slight passive orientation (4.8). This equates to a "moderate competency" level.

The remaining four supervisors were described as decidedly more active in their job approach (responses ranging from 7.0 to 8.1), or a high degree of competency.

Problem skills

A very similar response pattern to the previous dimension was also indicated in assessing the problem skills of the supervisors. Supervisor 3 was described as possessing only a moderate degree of reasoning, problem perception and focus, conceptual, innovativeness, and listening skills (a 5.0 response). The remaining supervisors were described as exhibiting more extensive problem skills.

Personal abilities

The similarities in responses continued for this last dimension describing the supervisors' leadership styles of Plant B. Supervisor 3 is best described as possessing moderate competency, while the remaining supervisors can be characterized as having a relatively higher degree of competency in their personal abilities.

Figures 47 through 51 (Appendix E) represent the leadership profiles of each supervisor of Plant B. The profiles depict that for Plant B the supervisory leadership styles that exist are: (1) an almost total "general" style of leadership with only three exceptions--standards (supervisor 5 tends to employ low standards) and participation (supervisor 1) falling on the "democratic" end of the continuum, and goal emphasis (supervisor 2) on the "autocratic" end of the leadership continuum--and (2) the supervisors possess a high degree of competency in performing their jobs (the only general exception is supervisor 3 who was described as possessing a moderate degree of competency).

Behavioral Profile of Plant B

The responses to the behavioral questionnaire by the supervisors and the foremen and other salaried personnel are reported and discussed in this section. The same classification scheme followed in the previous chapter for the behavioral section is employed in describing the behavior measured in Plant B.

Behavioral profile figures for the tabular data are included in Appendix E.

Supervisors' Description of Employees' Behavior

Table 12 reports the responses of the five supervisors of Plant B to the behavioral questionnaire describing their employees' behavior. The discussion in this section is primarily in terms of three types of behavior -- "negative," "general," and "positive," within the four categories of individual, intragroup lateral, intragroup vertical, and intergroup behavior.

Individual behavior

The supervisors described their employees' individual behavior by utilizing the nine indices which comprise this category. The description that follows is in terms of these nine individual behavior indices.

Job involvement.--A "negative" type of behavior was indicated by supervisors 1, 2 and 4. Considerable job involvement -- "positive" behavior indicator -- of their employees was the case as perceived by supervisors 3 and 7.

Commitment to meeting standards.--The extent that employees try to meet or exceed established work standards was described as "negative" in work groups 1 and 2; "general" in groups 3 and 5; and "positive" in only group 4.

Initiative.--The degree of initiative was moderate in groups 1, 2 and 3 ("general" behavior type), while it was "negative" in group 4 and highly "positive" in work group 5 (a response of 8).

Self-improvement.--Three supervisors described their employees' efforts at self-improvement to be relatively low -- falling in the

TABLE 12

PLANT B RESPONSE OF FIVE SECOND LEVEL SUPERVISORS TO
BEHAVIOR QUESTIONNAIRE DESCRIBING EMPLOYEE
BEHAVIOR BY VARIABLE AND WORK GROUP

Variable	Work Group				
	1	2	3	4	5
<u>Individual Behavior</u>					
Job Involvement	3	3	7	2	7
Commitment to Meeting Standards . .	1	2	5	7	5
Initiative.	5	5	5	2	8
Self-Improvement.	1	-	3	2	5
Work-Goal Commitment.	1	3	5	8	8
Frustration Levels.	3	8	5	8	5
Sense of Achievement.	3	4	3	3	8
Absenteeism	3	3	6	5	3
Turnover.	1	6	7	5	2
<u>Intragroup Behavior: Lateral</u>					
Confidence and Trust.	3	-	7	4	8
Job Related Communication	3	7	8	9	9
Non-Job Related Communication . . .	3	7	7	7	3
Cooperation Patterns.	3	3	7	6	8
Group Unity	7	-	8	5	8
Interaction off the Job	1	4	7	2	5
<u>Intragroup Behavior: Vertical</u>					
Trust and Confidence--Downward. . .	7	5	5	3	9
Trust and Confidence--Upward. . . .	3	2	3	3	7
Requested Information	3	7	7	3	8
Communications Screening.	7	-	8	2	7
Job Information	7	4	7	3	8
Human Relations Information	3	-	3	3	7
Cooperation and Teamwork.	3	3	7	3	7
Acceptance of Immediate Supervisor Decisions	7	-	7	7	9
Acceptance of Higher Level Management Decisions	3	3	7	7	7
Acceptance of Staff Group Decisions.	7	9	7	7	7
<u>Intergroup Behavior</u>					
Confidence and Trust.	7	5	3	7	7
Communications Accuracy	3	8	5	3	8
Communications Screening.	7	8	8	8	9
Informal Communications	1	4	7	8	5
Cooperation and Teamwork.	3	7	7	7	7
Team Spirit	7	3	6	2	7
Acceptance of Decisions	3	-	3	5	7
Interaction Patterns.	1	4	7	1	5

"negative" behavior grouping. The supervisor of work group 5 felt his employees exhibited a "general" behavior orientation vis-à-vis this variable. The supervisor of group 2 did not respond to this item.

Work-goal commitment.--Table 12 indicates that supervisors 4 and 5 regard their employees as having a relatively high degree of "positive" behavior orientation (both supervisors' responses were 8). At the other extreme, supervisors 1 and 2 indicated a "negative" behavior type with responses of 1 and 3 respectively. Supervisor 3 indicated a "general" behavior with his response of 5.

Frustration levels.--Only supervisor 1 indicated "negative" behavior, while supervisors 3 and 5 described "general" and supervisors 2 and 4 indicated "positive" behavior types.

Sense of achievement.--Employees in work groups 1, 3 and 4 were described by their supervisors as possessing "negative" behavior according to our scheme of classification (each response was 3). Work groups 2 and 5 were depicted as "general" and "positive" behaviorally oriented, respectively.

Absenteeism.--Three work groups -- 1, 2 and 5 -- possessed "negative" behavior, i.e., job attendance was felt to have an unstable effect on operations. The remaining two groups are classified as "general" behavior.

Turnover.--Groups 1 and 2 were depicted as "negative" types of behavior regarding the effect of turnover on operations. The supervisor of group 3 indicated the only "positive" orientation, i.e.,

turnover sometimes affects the group's operations. The remaining two supervisors responded that "general" behavior was the case.

Summarizing the responses of the five supervisors to the individual behavior questions shows that supervisor 1 expressed the highest number of "negative" replies with eight, while supervisor 5 had the highest number of "positive" responses with four.

Intragroup behavior: lateral relations

Six indices comprise this category of behavior. The five supervisors' responses from Table 12 are discussed within the context of these six variables.

Confidence and trust.--"Positive" behavior characterizes groups 3 and 5, while group 1 was described as possessing "negative" behavior and group 4 "general" behavior. Supervisor 2 did not respond to this question.

Job related communication.--Only supervisor 1 responded in the manner to place his group in the "negative" behavior grouping with all other replies being "positive."

Non-job related communication.--Supervisors 1 and 5 felt that their employees exhibit low degrees of non-job related communication (both responses were "3", placing these groups in the "negative" area). Groups 2, 3 and 4 were characterized as "positive" in their lateral intragroup behavior.

Cooperation patterns.--Cooperation patterns within the work group were perceived as "negative" by supervisors 1 and 2. They were "general" for group 4 and "positive" for groups 3 and 5.

Group unity.--"Positive" behavior was characterized by supervisors 1, 3 and 5. Only supervisor 4's attitude was included in the "general" grouping. Supervisor 2 did not respond to this question.

Interaction off the job.--Informal interactions off the job were depicted as "negative" by supervisors 1 and 4. Supervisor 3 was the only respondent to reply in a manner to allow the response to be included in the "positive" behavior grouping. The remaining two supervisors described "general" behavior.

In summary, five out of the six variables in the intragroup lateral behavior category were described as "negative" by supervisor 1, while supervisor 3 had all six responses in the "positive" behavior grouping.

Intragroup behavior: vertical relations

The five supervisors described their employees vertical relations within the work group by responding to ten questions directed at measuring the existing behavior. The discussion in this section is in terms of the ten variables comprising the category of vertical intragroup behavior.

Trust and confidence downward.--The response of supervisor 4 indicates "negative" behavior regarding the trust and confidence that supervisors have in subordinates. Supervisors 1 and 5 responded "positively" with a 7 and 8 reply respectively, while "general" behavior was indicated by supervisors 2 and 3.

Trust and confidence upward.--Only supervisor 5 responded other than "negatively" to this variable of vertical intragroup behavior; his was a "positive" response in describing the degree of trust and confidence that subordinates have in superiors.

Requested information.--Three supervisors (2, 3 and 5) described their work groups as exhibiting "positive" behavior regarding the accuracy and completeness of information which they request from employees. Supervisors 1 and 4 indicated "negative" behavior.

Communication screening.--Only supervisor 4 described his employees as almost always limiting important upward job information -- a "negative" orientation. Supervisor 2 did not respond to this item, while the remaining three supervisors indicated "positive" behavior for their work groups.

Job information.--Groups 1, 3 and 5 were described as "positive," i.e., they usually bring job problems to the attention of the supervisor. Supervisor 2's response was a "general" behavior indicator and a "negative" reply was recorded for supervisor 4.

Human relations information.--The extent that subordinates volunteer useful human relations information was described as "positive" only by supervisor 5. Three supervisors felt that a "negative" orientation existed within their work groups. Supervisor 2 elected not to respond to this question.

Cooperation and teamwork.--The responses of supervisors 1, 2 and 4 are in the "negative" behavior grouping whereas supervisors 3 and 5 both indicated a "positive" degree of cooperation and teamwork between the supervisor and his subordinates.

Acceptance of immediate supervisor decisions.--The four supervisors who replied to this variable were all of the opinion that "positive" behavior existed. Supervisor 2 did not respond.

Acceptance of higher level management decisions.--Supervisors 1 and 2 felt that "negative" behavior was indicated within their groups vis-à-vis this variable. The remaining supervisors expressed "positive" behavior to be the case for their groups.

Acceptance of staff group decisions.--All supervisors were of the opinion that their employees exhibit "positive" behavior in accepting decisions made by staff groups.

Summarizing the five supervisors' responses within this third major category of behavior shows that: (1) the orientation is definitely toward the "positive" behavior end of the continuum (twenty-seven "positive" responses, seventeen "negative," and three "general"); (2) supervisor 5 replied in each instance with a "positive" behavior description; and (3) supervisor 4 indicated the highest number of "negative" aspects within the category.

Intergroup behavior

Eight variables constitute this last major category of behavior. The responses of the five supervisors reported in Table 12 indicate their opinions regarding the intergroup behavior that exists between their work groups and others of Plant B.

Confidence and trust.--Response values of "7" indicated by supervisors 1, 4 and 5 fall within the "positive" behavior grouping. Supervisor 3 felt that a "negative" orientation existed between his work group and other groups regarding intergroup confidence and trust, while supervisor 2 responded that "general" behavior was the case.

Communications accuracy.--Intergroup information accuracy was described as "negative" for groups 1 and 4, "general" for group 3, and "positive" for groups 2 and 5.

Communications screening.--The incidence of blocking or screening intergroup communications was viewed by the five supervisors as seldom occurring -- a "positive" behavior orientation in all work groups.

Informal communications.--Discussions of the informal, non-job related types were perceived to rarely occur ("negative" behavior) by supervisor 1, often occurring ("general" behavior) by supervisors 2 and 5, and usually ("positive" behavior) the situation as described by supervisors 3 and 4.

Cooperation and teamwork.--Intergroup cooperation and teamwork were viewed as "positive" in all work groups except group 1 where the supervisor felt that "negative" behavior orientation prevailed.

Team spirit.--The expression of harmony, good will, or team spirit among the various groups was perceived as "positive" by supervisors 1 and 5, "general" by supervisor 3, and "negative" by supervisors 2 and 4.

Acceptance of decisions.--Supervisor 5's attitude was that usually his work group accepts decisions made by other groups -- a "positive" aspect. Supervisors 1 and 3 responded in a manner to place their groups in the "negative" behavior grouping, while supervisor 4 responded with a "general" behavior indicator. Supervisor 2 did not reply to this item.

Interaction patterns.--Informal interactions between the various work groups was viewed as "negative" by supervisors 1 and 4, "general" orientation by supervisors 2 and 5, and "positive" by supervisor 3.

In summary, the preceding eight intergroup behavior responses by the supervisors of Plant B indicate that: (1) overall the responses show a "positive" orientation; (2) supervisor 1 described the greatest number of "negative" aspects of intergroup behavior; and (3) supervisor 5 expressed the greatest number of "positive" attributes.

Figures 52 through 56 (Appendix E) represent the behavioral profiles of the five work groups based upon the supervisors' perceptions as reported in Table 12.

The foremen and other salaried personnel's perceptions of the same five work groups are discussed in the following section.

Foremen and Other Salaried Personnel's Description of Employees' Behavior

Table 13 depicts average responses of the foremen and other salaried personnel of Plant B to the behavioral questionnaire measuring employee behavior. The discussion in this section is in terms of the nine variables comprising individual behavior, the six variables of lateral intragroup behavior, the ten variables of vertical intragroup behavior, and the eight variables of intergroup behavior.

Finally, behavioral profile figures representing average responses of the foremen and other salaried personnel to the thirty-three behavior variables are included as a part of Appendix E.

Individual behavior

Job involvement.--The responses describing individual job involvement for group 2 indicate "negative" behavior. Work groups 4 and 5 described "general" behavior, while groups 1 and 3 indicated a "positive" behavior orientation.

TABLE 13

PLANT B AVERAGE RESPONSE OF FOREMEN AND OTHER SALARIED
PERSONNEL TO BEHAVIOR QUESTIONNAIRE DESCRIBING
EMPLOYEE BEHAVIOR BY VARIABLE AND WORK GROUP

Variable	Work Group				
	1	2	3	4	5
<u>Individual Behavior</u>					
Job Involvement	6.8	3.0	7.0	5.5	4.5
Commitment to Meeting Standards . .	6.7	7.0	6.5	5.0	4.0
Initiative.	6.7	7.0	7.5	5.5	3.0
Self-Improvement.	3.3	3.0	4.0	4.0	3.0
Work-Goal Commitment.	5.2	8.0	7.5	8.0	6.0
Frustration Levels.	7.0	5.0	7.8	8.5	5.0
Sense of Achievement.	7.3	7.0	7.5	5.5	5.0
Absenteeism	3.2	3.0	4.5	2.5	4.0
Turnover.	7.2	5.0	7.8	4.5	6.0
<u>Intragroup Behavior: Lateral</u>					
Confidence and Trust.	6.7	7.0	7.0	8.0	5.0
Job Related Communication	7.7	7.0	8.8	7.0	3.0
Non-Job Related Communication . . .	6.8	5.0	5.8	5.0	6.0
Cooperation Patterns.	6.7	7.0	8.5	8.0	6.0
Group Unity	6.3	8.0	7.8	6.5	6.0
Interaction off the Job	5.3	1.0	5.8	5.5	3.0
<u>Intragroup Behavior: Vertical</u>					
Trust and Confidence--Downward. . .	7.7	7.0	7.2	6.0	4.5
Trust and Confidence--Upward. . . .	6.5	7.0	6.8	6.0	5.0
Requested Information	7.5	9.0	7.8	7.0	5.5
Communication Screening	8.0	9.0	8.0	7.5	6.0
Job Information.	7.8	9.0	8.0	5.5	8.0
Human Relations Information	4.7	7.0	6.5	5.0	4.0
Cooperation and Teamwork.	5.8	5.0	8.2	5.5	5.0
Acceptance of Immediate Supervisor Decisions	7.7	7.0	7.2	5.0	7.5
Acceptance of Higher Level Management Decisions	7.5	5.0	8.0	7.0	5.0
Acceptance of Staff Group Decisions	7.7	8.0	7.0	6.0	7.0
<u>Intergroup Behavior</u>					
Confidence and Trust	8.2	6.0	5.5	8.0	4.0
Communications Accuracy	7.2	7.0	6.0	7.5	5.0
Communications Screening.	8.5	8.0	7.8	7.5	7.5
Informal Communications	5.3	4.0	4.0	7.0	2.0
Cooperation and Teamwork.	5.3	3.0	4.0	6.5	2.0
Team Spirit	6.8	3.0	6.5	5.5	4.0
Acceptance of Decisions	6.3	7.0	7.0	7.0	4.0
Interaction Patterns.	4.5	1.0	2.5	3.0	2.0

Commitment to meeting standards.--The first three work groups were described by the foremen and other salaried personnel as usually trying to do a full day's work -- the responses indicate "positive" behavior in our classification scheme. Both groups 4 and 5 were viewed as possessing "general" behavior.

Initiative.--Employee job initiative was viewed as "negative" by the respondents in group 5, while group 4 was described as falling within the "general" behavior grouping. Work groups 1, 2 and 3 were each characterized as example of "positive" behavior types.

Self-improvement.--"Negative" behavior on the part of employees in work groups 1, 2 and 5 is evidence regarding attempts at self-improvement according to the respondents within these groups. Work groups 3 and 4 were viewed as possessing "general" behavior.

Work-goal commitment.--The extent of individual commitment to meeting goals was described to be "positive" in groups 2, 3 and 4. "General" behavior was the case for groups 1 and 5.

Frustration levels.--The 5.0 response by groups 2 and 5 places these groups in the "general" behavior area of the continuum. "Positive" behavior existing within groups 1, 3 and 4 was the attitude of the respondents regarding the feeling of employees' frustration in performing job tasks; i.e., there exists a very low level of frustration within these groups.

Sense of achievement.--Job satisfaction in the opinion of groups 1, 2 and 3 was rated in the "positive" behavior grouping. The last two work groups possess "general" behavior vis-à-vis a sense of achievement.

Absenteeism.--The effect of job attendance was viewed as "negative" within groups 1, 2 and 4, and "general" for groups 3 and 5. No group responded in a manner to allow their inclusion in the "positive" grouping (responses of 6.5 to 9.0).

Turnover.--The unstable effects of employee turnover were regarded as only sometimes occurring within groups 1 and 3 -- a "positive" example of behavior, while the remaining groups felt that often the turnover rate affected their operations -- a "general" behavior indicator for this last variable in the individual behavior category.

In summary, overall the five work groups are oriented toward the "positive-general" area of the behavior continuum (19 "positive" responses, 18 "general" responses, and only 8 "negative" replies). Work group 5 was described as almost totally "generally" in their behavior pattern, while group 3 had the highest "positive" orientation. Group 2 had the highest number of "negative" responses at three out of the eight total negative replies.

Intragroup behavior: lateral relations

Confidence and trust.--With the exception of group 5 which described "general" behavior, all work groups were depicted as exhibiting "positive" behavior in their mutual trust and confidence in each other.

Job related communication.--Only group 5 was characterized as possessing other than "positive" behavior in job related discussions within the group. Group 5 is best characterized as having "negative" behavior aspects (a 3.0 response).

Non-job related communication.--Work groups 2 through 5 were described by their foremen and salaried personnel as exhibiting "general" behavior in that discussions within the group pertaining to non-job matters often take place. The response of group 1 falls within the "positive" grouping of our classification scheme.

Cooperation patterns.--The first four indicated "positive" behavior existing within their groups, while group 5 replied that "general" behavior regarding this variable was the case.

Group unity.--A relatively high degree of intragroup unity exists for all five groups. The responses of work groups 1 and 5 are on the high side of the "general" behavior grouping with the remaining group responses falling within the "positive" behavior classification.

Interaction off the job.--Groups 2 and 5 indicated low informal interaction between group members. Their responses of 1.0 and 3.0, respectively, indicates "negative" behavior. The remaining three groups felt that "general" behavior was characteristic.

In summary, the previous six variables of lateral intragroup behavior indicate that as a whole the five work groups of Plant B are "positively" oriented (sixteen "positive" responses). Work group 5 indicated two out of the three "negative" responses but was basically oriented toward the "general" behavior grouping.

Intragroup behavior: vertical relations

Trust and confidence downward.--Superiors' trust and confidence in subordinates were viewed as "positive" by the first three work groups and "general" by the last two groups.

Trust and confidence upward.--The pattern of subordinates' trust and confidence in superiors was identical to the previous variable response.

Requested information.--Only group 5 responded with other than a "positive" reply to the variable measuring supervisory requested information. Its response was in the "general" behavior grouping.

Communication screening.--Responses describing the volunteering of upward information fall within the same behavior grouping as was depicted in the previous variable.

Job information.--A high degree of "positive" behavior regarding the upward flow of job information was indicated by four work groups. Only group 4's response of 5.5 ("general" behavior) was outside the "positive" grouping.

Human relations information.--Work groups 1, 4 and 5 expressed the opinion that subordinates often volunteered human relations information to superiors -- "general" behavior response. Work groups 2 and 3 indicated a higher extent of volunteered information, or a "positive" behavior indicator.

Cooperation and teamwork.--The foremen of work group 3 collectively expressed the attitude that almost always a sense of cooperation and teamwork exists between the supervisor and subordinates. The response was the only "positive" reply with the other groups falling within the "general" behavior grouping.

Acceptance of immediate supervisor decisions.--In evaluating the extent of acceptance of the supervisor's decisions, work group 4's response falls within the "general" behavior area. The remaining four groups' responses are in the "positive" behavior category.

Acceptance of higher level management decisions.--"General" behavior best describes work groups 2 and 5, while groups 1, 3 and 4 indicated a higher degree of employee acceptance of decisions made at levels above their immediate superior -- "positive" behavior responses.

Acceptance of staff group decisions.--In responding to this last variable in the major category, group 4 with a "general" response, was the exception to the "positive" behavior orientation of the groups.

In summary, considering all five work groups there is a definite "positive" leaning. Thirty-two responses were classified as "positive," eighteen were "general," and no "negative" replies were indicated. Work group 3's descriptions were all in the "positive" behavior grouping.

Intergroup behavior

Confidence and trust.--The responses of work groups 1 and 4 to the variable measuring intergroup confidence and trust places these groups in the "positive" behavior grouping. The remaining three groups indicated with their responses a "general" behavior orientation.

Communications accuracy.--Two work groups -- 3 and 5 -- were of the opinion that communications between their group and other groups were accurate and complete to the extent which allowed the responses to fall within the "general" behavior category. Groups 1, 2 and 4 indicated "positive" behavior.

Communications screening.--A relatively low level of intergroup information restriction was viewed to exist for each of the work groups. Thus, all groups result in being placed in the "positive" behavior grouping.

Informal communications.--Informal discussions between groups was indicated to be relatively low in group 5 -- "negative" behavior, while it was viewed to be common in group 4 -- "positive" behavior. Groups 1 through 3 indicated "general" behavior.

Cooperation and teamwork.--Two work groups -- 2 and 5 -- were of the opinion that "negative" behavior was exhibited regarding intergroup cooperation and teamwork. Only group 4's responses were in the "positive" behavior direction, while groups 1 and 3 fall within the "general" area.

Team spirit.--Group 2 was the only work group to describe intergroup team spirit to be in a "negative" behavioral direction. Groups 1 and 3 felt that "positive" intergroup behavior was the case. Groups 4 and 5 replied within the "general" behavior grouping.

Acceptance of decisions.--The attitudes expressed by groups 2, 3 and 4 were that "positive" behavior existed vis-à-vis intergroup acceptance of decisions. Groups 1 and 5 responded in a way to place their groups within the "general" behavior category.

Interaction patterns.--Group 1 expressed the view that often informal intergroup interactions take place. The 4.5 response value is within the "general" behavior grouping. The remaining four work groups' responses were all in the "negative" area of intergroup

behavior -- the only variable of behavior to receive such a high number of "negative" responses.

Summarizing the preceding eight variables we find that for the five work groups there exists a slight "positive" orientation in behavior (17 "positive" responses, 15 "general"). Work group 4 had the most "positive" indicators with six.

Figures 57 through 61, Appendix E, show the behavioral patterns for the five work groups based upon the data from Table 13.

The structure, leadership, and behavior of Plant C will be described in the next chapter.

CHAPTER V

DATA DESCRIPTION OF PLANT C

Introduction

Description of the data collected is presented in this chapter for Plant C of the research study. The approach used in describing the various variables measured for the study follows that of the previous two chapters in describing Plants A and B. Summary profiles of the primary and mediating structural, leadership, and behavioral factors of Plant C are included in Appendix F.

Seven departments, or work groups, composed of twenty salaried personnel organized into from one to three managerial levels comprise Plant C of the research study. In addition, the assistant plant manager was included in the study bringing the total of salaried personnel who participated in the study to twenty-one employees. Figure 6 represents the organization structure of Plant C. As the chart depicts, Plant C differs somewhat from the two previous plants in the way it is organized. This difference necessitated a slight modification in the data collection procedure that was followed for Plant C and requires a clear understanding prior to describing the factors which exist in Plant C and before interplant comparisons can be made in Chapter VI.

In responding to the structural questionnaire the employees described their work group as depicted in the organization chart. The plant manager's leadership style was described by the assistant plant manager and supervisors 4, 5, 6 and 7. The assistant plant manager's

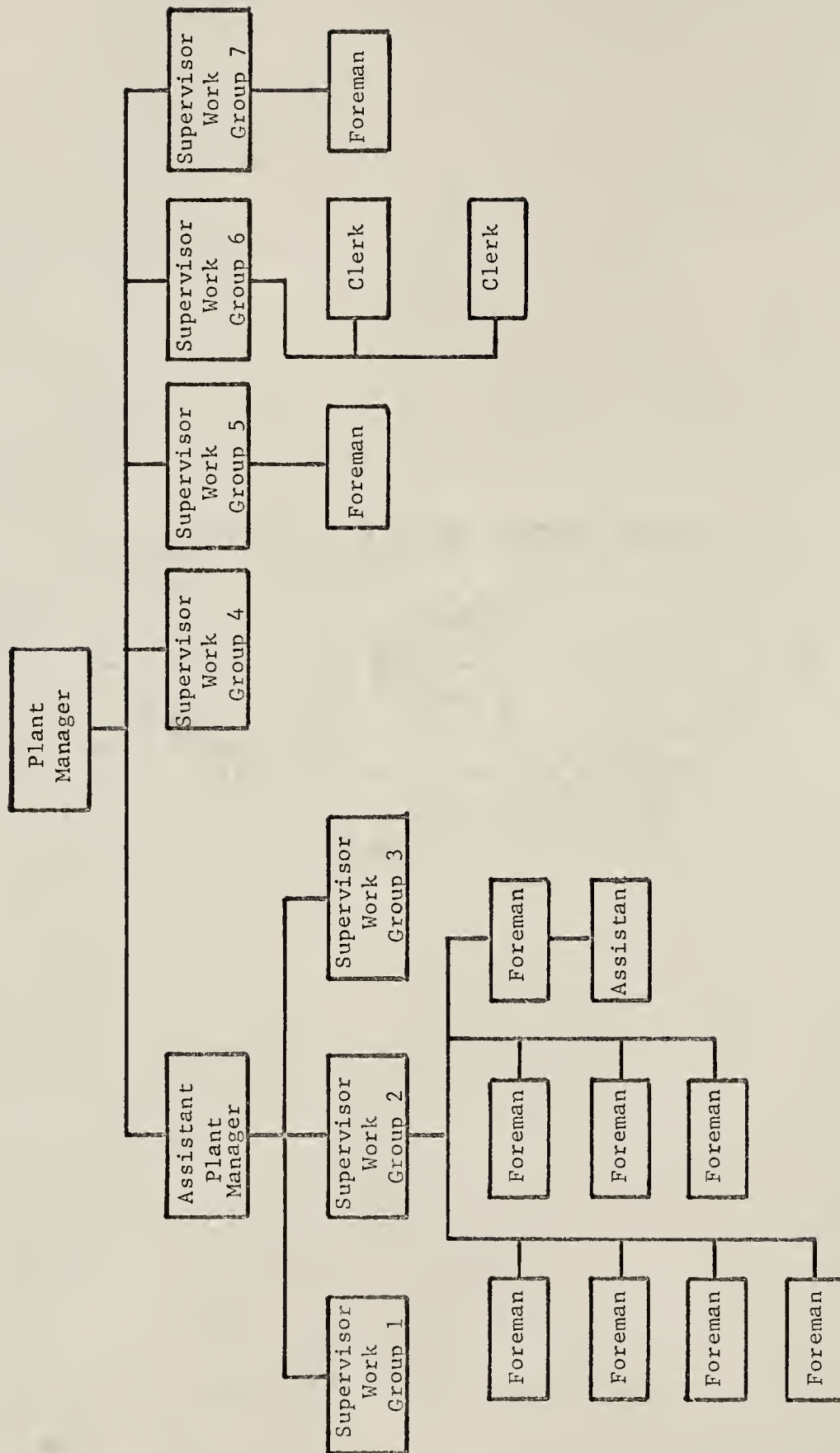


Fig. 6.--Organization Chart, Plant C.

leadership style was evaluated by supervisors 1, 2 and 3. The leadership styles of supervisors 1, 5, 6 and 7 were described by their immediate subordinates. Since some subordinates, in keeping with the research design, did not participate in evaluating the supervisor for work groups 2, 3 and 4, description of the leadership styles of these supervisors was not possible.

The assistant plant manager described the behavioral factors existing in work groups 1, 2 and 3. The supervisors of groups 1, 4, 6 and 7 individually evaluated the behavior characteristics of their respective groups while in turn the foremen and clerks of these same groups described the behavior elements as they perceived them.

Primary Structural Variables of Plant C

Table 14 represents the average responses of the seven work groups to the questionnaire items measuring the primary structural elements of size, work flow, spatial-physical-temporal factors, work demands, and heuristics of Plant C.

The discussion in this section is in terms of these five elements.

Size

The value responses reported in Table 14 are arrived at by using the size table included in the glossary. All seven work groups are small in size for Plant C.

Work Flow

The intragroup and intergroup input-output relationships that existed in Plant C were measured. They can be described as ranging from non-integrated to integrated work flows. The remaining six groups have partial integration.

TABLE 14

PLANT C AVERAGE RESPONSE TO PRIMARY
STRUCTURAL QUESTIONNAIRE ITEMS
BY VARIABLE AND WORK GROUP

Variable	Work Group						
	1	2	3	4	5	6	7
Size ^a	1	1	1	1	1	1	1
Work Flow							
Intragroup	5.7	6.0	5.5	5.7	5.8	4.4	3.2
Inter group:							
Work Group 1	---	6.3	6.7	5.7	---	---	---
" " 2	7.0	---	---	---	7.0	---	---
" " 3	1.3	---	---	---	1.6	---	---
" " 4	4.0	2.0	2.0	---	---	---	---
" " 5	7.6	7.2	6.7	---	---	---	---
" " 6	7.2	---	---	---	---	---	8.1
" " 7	7.7	---	---	---	7.0	7.0	---
S-P-T Factors							
Intragroup	5.5	4.8	3.3	2.7	6.3	2.9	1.4
Inter group:							
Work Group 1	---	6.8	5.4	4.8	---	---	---
" " 2	---	---	---	---	7.0	---	---
" " 3	---	---	---	---	2.5	---	---
" " 4	9.0	9.0	---	---	---	---	---
" " 5	8.0	7.2	---	---	---	---	---
" " 6	---	---	---	---	---	---	3.2
" " 7	---	---	---	---	4.2	4.2	---
Work Demands	5.4	6.0	5.3	7.0	5.3	3.3	6.5
Heuristics	3.9	1.0	2.0	4.5	2.5	1.3	3.5

^aThe size average responses are arrived at by using Table 23, which appears in the glossary.

Intergroup work flow

Since only the significant relationships were of concern in the study, the least important of these relationships were ascertained during the early observation and interview stage. Their omission resulted in the empty cells of Table 14.

Work flow integration is highest between groups 6 and 7 (a 8.1 response), and the lowest, or almost non-integrated, between groups 3 and 1 (a response of 1.3). Generally, in Plant C the degree of intergroup work flow is largely non-integrated for groups 3 and 4, while for the remaining groups there exists a fair to considerable degree of integration in work flows.

Spatial-Physical-Temporal Factors

Intragroup s-p-t factors

Work group 7 exhibits a high degree of concentration within their group (a 1.4 response). The responses of groups 3, 4 and 6 indicate a slightly less amount of concentration, while work groups 1, 2 and 5 described their groups as being the most dispersed of the seven groups but still only a moderate degree of separation within their respective group.

Intergroup s-p-t factors

Work group 4 indicated the highest degree of separation from groups 1 and 2 (a 9.0 response), followed by work group 5's 8.0 and 7.2 responses in describing their intergroup relations with groups 1 and 2. The degree of concentration between groups 3 and 5 (2.5 response) and between groups 6 and 7 (3.2 response) indicates a fairly high amount of concentration between these groups.

Generally, given the intergroup s-p-t factors that were measured, Plant C can be characterized as having departments that are fairly dispersed from each other.

Work Demands

Work group 6 described their work demands as being considerably stable from week to week. Work groups 1, 2, 3 and 5 felt that their work demands were stable about half the time, whereas groups 4 and 7 (with responses of 7.0 and 6.5 respectively) were of the opinion that their work demands exhibited some unstability from week to week.

Heuristics

In describing this last variable within the primary structural category, groups 2 and 6 indicated a very high degree of predictability in their actions (1.0 and 1.3 responses). Groups 3, 5 and 7 also indicated that they usually are able to predict the outcome of actions or decisions but to a lesser extent (responses of 2.0, 2.5, and 3.5). The remaining two work groups can be described as often being able to predict their actions. None of the seven work groups of Plant C indicated any appreciable degree of unpredictability in their respective actions or decisions that they were required to make.

Figures 62 through 68 included in Appendix F summarize the data depicted in Table 14. The seven profiles also include the mediating structural variables for Plant C which will be the topic of discussion in the section that follows.

Mediating Structural Variables of Plant C

Table 15 reports the average responses to the questionnaire measuring the mediating structural variables of formal authority relationships, control system, and information system of Plant C.

Formal authority

The sub-variables of delegation, levels, and departmentation comprise the main variable of formal authority relationships. The responses to the three sub-variables are averaged to obtain the response value depicting formal authority. The discussion is in terms of the main variable.

The formal authority relationships are largely unspecified for work group 4 (response of 3.0). The situation is one of more specific formalization of the authority relationships in groups 1, 2, 5, 6 and 7, but still not defined in detail for these groups. Group 3 indicated the highest degree of definition and specification of the formal authority relationships with a response of 6.0.

Control System

Work group 7 indicated that there exists almost no specification of standards, measuring instruments, or a system to allocate rewards-penalties within their work group (a 3.4 response). Groups 1, 3, 4 and 6 indicated a moderate degree of specification with group 5's response of 6.2 indicating a still higher degree of formalization in the control system. Only group 2, with a 9.0 response, described the existing control system to be a formal individual one.

Information System

Intragroup information system

Work group 2 described their information system to be fairly simple, i.e., only a minimum of formal, rationalized methods exist to receive and communicate intragroup information. Groups 3 and 4 indicated that their information system was quite defined and formalized (6.6 and 7.7

responses). The remaining groups fall between these two extremes with a system that can be described as partially formalized.

TABLE 15

PLANT C AVERAGE RESPONSE TO MEDIATING
STRUCTURAL QUESTIONNAIRE ITEMS
BY VARIABLE AND WORK GROUP

Variable	Work Group						
	1	2	3	4	5	6	7
Formal Authority:	4.5	4.7	6.0	3.0	3.8	4.6	4.6
Delegation	3.9	3.0	4.5	4.5	2.0	5.2	6.0
Levels	4.0	6.0	5.0	---	3.8	3.0	4.2
Departmentation	5.4	5.0	8.0	1.5	5.8	5.6	3.5
Control System	4.7	9.0	4.5	4.7	6.2	4.5	3.4
Information System:							
Intragroup	5.1	4.8	6.6	7.7	5.7	5.2	6.0
Intergroup	4.4	3.8	5.8	6.0	5.4	4.8	4.8
Vertical	4.9	6.0	5.8	5.7	6.1	4.6	4.8

Intergroup information system

All seven work groups can be characterized as possessing some aspects of a formalized system and at the same time some of an unformalized one regarding intergroup communications. Group 2 indicated the simplest system (a response of 3.8), whereas group 4 described their intergroup system as somewhat more complex (6.0).

Vertical information system

Generally, all seven work groups have elements of a simple and a complex vertical information system. The responses range across the center of the measurement continuum from 4.6 to 6.1.

Figures 62 through 68, included as a part of Appendix F, graphically depict the mediating structural profiles of Plant C and the primary structural variables that were presented in the previous section.

Leadership Dimensions of Plant C

The leadership style of the plant manager, the assistant plant manager, and four supervisors of Plant C are described in this section. Response values to the first eight leadership dimensions of 1.0 to 3.5 are described as "democratic" leadership indicators, responses of 3.6 to 6.4 are "general" styles, and responses of 6.5 to 9.0 are "autocratic" leadership examples. Responses to the miscellaneous leadership dimensions are to be described as "low competency" for values ranging from 1.0 to 3.5, "moderate competency" for responses from 3.6 to 6.4, and "high competency" examples for responses of 6.5 to 9.0.

Plant Manager's Leadership Style

Table 16 reports the average responses of the assistant plant manager and the supervisors of work groups 4 through 7 to the leadership questionnaire evaluating the leadership style of the plant manager of Plant C.

Considering the eight dimensions of representation, interaction, standards, goal emphasis, participation, direction, rule orientation, and motivation as a whole to characterize the style of the plant manager, the average responses indicate that his leadership style is clearly a

TABLE 16

PLANT C AVERAGE RESPONSE OF THE ASSISTANT PLANT MANAGER
AND FOUR SUPERVISORS TO LEADERSHIP QUESTIONNAIRE
EVALUATING THE PLANT MANAGER'S LEADERSHIP
STYLE BY VARIABLE

Variable	Average Response
<u>Leadership Dimensions</u>	
Representation	3.5
Interaction.	4.2
Standards.	4.0
Goal Emphasis.	4.1
Participation.	3.9
Direction.	4.4
Rule Orientation	4.4
Motivation	3.6
<u>Miscellaneous Leadership Dimensions</u>	
Technical Qualifications	8.1
Action Orientation	7.9
Problem Skills	7.5
Personal Abilities and Orientation	8.1

"general" one with only "representation" falling within the "democratic" classification.

The responses to the miscellaneous dimensions measuring the plant manager's competency all lie within the "high competency" area.

Figure 69, Appendix F, depicts the leadership profile of the plant manager based upon the average responses reported in Table 16.

Assistant Plant Manager's Leadership Style

The average responses of supervisors 1, 2 and 3 to the leadership questionnaire evaluating the assistant plant manager are reported in Table 17.

The three supervisors indicated that the leadership style of the assistant plant manager was a "general" one. All responses being within the 3.6 and 6.4 range. "Standards" received the lowest response (3.6) -- tending toward a "democratic" style, while responses to the "direction" dimension indicated a tendency toward an "autocratic" leadership style.

In describing the competency of the assistant plant manager the three supervisors felt that he possessed a moderately "high" degree of competency in the four areas measured.

The leadership profile of the assistant plant manager is included in Appendix F, Figure 70.

Supervisors' Leadership Styles

Table 18 reports the average responses of the foremen and other salaried personnel of work groups 1, 5, 6 and 7 to the leadership questionnaire describing their immediate superior's leadership style.

The discussion in this section is in terms of the twelve leadership dimensions describing the styles of four selected supervisors of Plant C.

TABLE 17

PLANT C AVERAGE RESPONSE OF SUPERVISORS 1, 2 and 3
TO LEADERSHIP QUESTIONNAIRE EVALUATING
THE ASSISTANT PLANT MANAGER'S
LEADERSHIP STYLE BY VARIABLE

Variable	Average Response
<u>Leadership Dimension</u>	
Representation	4.4
Interaction.	5.2
Standards.	3.6
Goal Emphasis.	5.9
Participation.	4.9
Direction.	6.0
Rule Orientation	3.8
Motivation	4.6
<u>Miscellaneous Leadership Dimensions</u>	
Technical Qualifications	7.2
Action Orientation	7.8
Problem Skills	7.0
Personal Abilities and Orientation	7.8

TABLE 18

PLANT C AVERAGE RESPONSE OF FOREMEN AND OTHER SALARIED
PERSONNEL TO LEADERSHIP QUESTIONNAIRE
EVALUATING THEIR IMMEDIATE SUPERIOR'S
LEADERSHIP STYLE BY VARIABLE
AND WORK GROUP

Variable	Work Group			
	1	5	6	7
<u>Leadership Dimensions</u>				
Representation	4.7	4.7	3.7	6.9
Interaction	5.6	5.3	4.2	5.5
Standards	5.2	8.3	3.8	6.7
Goal Emphasis	6.4	7.3	5.0	7.3
Participation	4.8	5.0	4.3	5.0
Direction	5.5	4.9	4.3	6.4
Rule Orientation	5.1	4.5	3.2	6.7
Motivation	5.5	4.7	4.2	4.8
<u>Miscellaneous Leadership Dimensions</u>				
Technical Qualifications	8.2	8.3	5.3	8.0
Action Orientation	7.8	8.5	7.1	5.6
Problem Skills	7.3	5.3	4.9	4.0
Personal Abilities and Orientation	7.3	7.1	7.1	4.7

Representation

Supervisor 7 is described by his subordinate as more often representing upper management than his own work group -- "autocratic" leadership style. The other three supervisors are characterized by their subordinates as employing a "general" style.

Interaction

All four supervisors are described as encouraging a "general" personal interaction within their groups. The responses ranged across the center of the continuum from 4.2 to 5.6.

Standards

Supervisors 5 and 7 are described as unilaterally emphasizing relatively high standards for their groups -- an "autocratic" leadership style. Supervisors 1 and 6 are employing a "general" style in the opinion of their subordinates.

Goal emphasis

Individual as opposed to group goal emphasis is stressed by supervisors 5 and 7 -- "autocratic" style. A "general" orientation is followed by supervisors 1 and 6 in that they tend to employ a combination of group and individual goal emphases.

Participation

"General" participations leadership styles best describe the four supervisors evaluated. All responses fall within this descriptive category.

Direction

"General" direction is employed by the supervisors according to the responses of their subordinates. Supervisor 7 was described as tending toward an "autocratic" style (a response of 6.4).

Rule orientation

The first instance of a "democratic" orientation is indicated for supervisor 6. Sometimes he allows personal judgment to be used in interpreting formal rules and policies. Supervisor 7 was characterized as usually enforcing strict adherence to rules -- "autocratic" style, while supervisors 1 and 2 employ a "general" attitude.

Motivation

Each of the four supervisors was perceived by their subordinates to employ a combination of rewards and penalties in motivating employees. The responses indicate a "general" leadership style.

Technical qualifications

Supervisor 6 was the only one to be characterized as possessing other than a "high" degree of competency. The subordinates rated his technical qualifications as "moderate."

Action orientation

Supervisors 1, 5 and 6 were viewed by their subordinates as quite active in approaching their jobs ("high competency" example), whereas supervisor 7 was characterized as only possessing "moderate competency" in his job action orientation.

Problem skills

"High competency" in personal problem skills dealing with work matters was attributed to supervisor 1. The remaining three supervisors fall within the "moderate competency" classification.

Personal abilities and orientation

Supervisors 1, 5 and 6 exhibit a "high competency" level in their personal abilities and orientation. The responses indicated a positive tendency by the supervisors. Only supervisor 7 was described as moderately positive -- falling within the "moderate competency" category -- vis-à-vis this leadership dimension.

Figures 71 through 74, Appendix F, represent the leadership profiles of the four supervisors. In summary, the supervisors, as a group, employ a "general" leadership style. Supervisor 7 was described as most nearly oriented toward an "autocratic" style of leadership. Personal competency was viewed as highest for supervisor 1 and somewhat "moderate" for supervisor 7.

Behavioral Profile of Plant C

The approach that was followed in the previous two chapters in describing Plants A and B is continued in this last section of the chapter. The behavioral patterns of Plant C, based upon the opinions of the respondents, are to be discussed in terms of "negative," "general," and "positive" examples of behavior within the four major categories of individual, lateral intragroup, vertical intragroup, and intergroup behavior.

Assistant Plant Manager's Description of Employee Behavior

The responses of the assistant plant manager to the behavioral questionnaire were directed at describing the behavior of work groups 1, 2 and 3. Table 19 reports his perceptions to the thirty-three behavior variables within the four major categories. The discussion in this section is primarily in terms of the four major categories of behavior.

Individual behavior

The assistant plant manager described the three work groups' individual behavior to be "general" in four areas and "positive" in four. The only instance of "negative" behavior being indicated is in absenteeism (a response of 3.0). Basically, then, he perceives their individual behavior to be of a beneficial and desirable nature.

Intragroup lateral behavior

The first five variables within this category are indicative of "positive" behavior. The last variable, interaction off the job, was viewed as "general" behavior. Clearly the assistant plant manager feels that the groups are oriented toward "positive" behavior types in their lateral intragroup relations.

Intragroup vertical relations

The vertical relations within the groups were depicted by the assistant plant manager as decidedly "positive" oriented. Only two areas -- trust and confidence upward and acceptance of immediate supervisor's decisions -- were described in a manner to allow their inclusion in the "general" behavior grouping.

TABLE 19

PLANT C RESPONSE OF THE ASSISTANT PLANT MANAGER
TO BEHAVIOR QUESTIONNAIRE DESCRIBING EMPLOYEE
BEHAVIOR OF WORK GROUPS 1, 2 and 3

Variable	Response
<u>Individual Behavior</u>	
Job Involvement	7
Commitment to Meeting Standards	6
Initiative.	6
Self-Improvement.	5
Work-Goal Commitment.	6
Frustration Levels.	7
Sense of Achievement.	7
Absenteeism	3
Turnover.	8
<u>Intragroup Behavior: Lateral Relations</u>	
Confidence and Trust.	8
Job Related Communication	8
Non-Job Related Communication	7
Cooperation Patterns.	7
Group Unity	7
Interaction off the Job.	5
<u>Intragroup Behavior: Vertical Relations</u>	
Trust and Confidence--Downward.	8
Trust and Confidence--Upward.	5
Requested Information	7
Communication Screening	8
Job Information	7
Human Relations Information	7
Cooperation and Teamwork.	7
Acceptance of Immediate Supervisor Decisions.	6
Acceptance of Higher Level Management Decisions	7
Acceptance of Staff Group Decisions	7
<u>Intergroup Behavior</u>	
Confidence and Trust.	7
Communications Accuracy	7
Communications Screening.	8
Informal Communications	7
Cooperation and Teamwork.	7
Team Spirit	8
Acceptance of Decisions	7
Interaction Patterns.	4

Intergroup behavior

Of the eight variables comprising intergroup behavior only the response to the interaction patterns question falls within a grouping other than "positive" behavior. In describing this variable the assistant plant manager indicated a "general" behavior orientation on the part of work groups 1, 2 and 3.

Figure 75, Appendix F, represents the behavioral profile of the three work groups based upon the assistant manager's responses. The profile highlights the "positive" behavior orientation of his responses.

Supervisors' Description of Employee Behavior

Table 20 represents the individual responses of supervisors 1, 5, 6 and 7 to the behavior questionnaire describing their employees' behavior. The discussion in this section is to be in terms of the four supervisors' responses to the four major categories of behavior.

Individual behavior

In replying to the nine variables comprising this category of behavior, supervisor 6 indicated eight descriptive responses falling within the "positive" behavior grouping. The absenteeism question drew the only "negative" type of reply from supervisor 6 (a response of 2.0).

Supervisor 7 responded in a manner to allow three variables of individual behavior to be placed in the "negative" grouping -- the highest number of "negative" responses of the four supervisors. Two of the nine variables measuring individual behavior had two supervisors indicating a "negative" descriptive response: (1) commitment to meeting standards, supervisors 5 and 7; and (2) absenteeism, supervisors 1 and 6.

TABLE 20

PLANT C RESPONSE OF SUPERVISORS TO BEHAVIOR
QUESTIONNAIRE DESCRIBING EMPLOYEE
BEHAVIOR BY VARIABLE
AND WORK GROUP

Variable	Work Group			
	1	5	6	7
<u>Individual Behavior</u>				
Job Involvement	7	5	8	7
Commitment to Meeting Standards . .	5	1	7	1
Initiative.	7	5	7	7
Self-Improvement.	6	5	9	3
Work-Goal Commitment.	9	1	8	5
Frustration Levels.	7	9	9	9
Sense of Achievement.	8	5	8	7
Absenteeism	1	9	2	9
Turnover.	9	9	8	1
<u>Intragroup Behavior: Lateral</u>				
Confidence and Trust.	7	6	9	7
Job Related Communication	7	5	7	7
Non-Job Related Communication . . .	1	5	5	3
Cooperation Patterns.	8	9	8	5
Group Unity	7	3	8	9
Interaction off the Job	1	1	6	3
<u>Intragroup Behavior: Vertical</u>				
Trust and Confidence--Downward. . .	9	8	8	9
Trust and Confidence--Upward. . . .	8	9	8	9
Requested Information	7	7	8	7
Communication Screening	7	9	9	9
Job Information	6	7	8	3
Human Relations Information	5	7	8	1
Cooperation and Teamwork.	5	7	7	7
Acceptance of Immediate Supervisor Decisions	7	5	7	7
Acceptance of Higher Level Management Decisions	7	9	7	7
Acceptance of Staff Group Decisions.	3	7	8	1
<u>Intergroup Behavior</u>				
Confidence and Trust.	8	9	8	9
Communications Accuracy	8	7	7	7
Communications Screening.	9	9	9	9
Informal Communications	1	5	7	3
Cooperation and Teamwork.	9	5	8	3
Team Spirit	8	9	8	9
Acceptance of Decisions	5	9	9	7
Interaction Patterns.	1	2	5	3

Generally, the orientation of the four supervisors in describing individual employee behavior is decidedly in the "positive" behavior grouping. Of the thirty-six total responses (a 4 x 9 matrix) twenty-two fall within the "positive" area, seven in the "general" grouping, and seven responses were included in the "negative" grouping.

Intragroup lateral behavior

Of the six total "negative" behavior examples indicated by the supervisors, non-job related communication received two and interaction off the job had three responses. Group unity received the sixth "negative" reply from supervisor 5.

The supervisors of Plant C, as a group, indicated "positive" lateral behavior being exhibited by their employees. Twelve of the twenty-four total responses are in the "positive" behavior grouping.

Intragroup vertical behavior

The four supervisors responded to ten questions in describing the intragroup vertical behavior of their employees. Supervisor 6 indicated a "positive" behavior orientation on the part of his employees -- all responses are in this grouping. Supervisor 7's responses include three of the four total "negative" replies to this category of behavior. The remaining seven responses were all within the "positive" grouping for supervisor 7. In responding to the question measuring the type of behavior associated with the acceptance of staff group decisions, supervisors 1 and 7 each felt their employees possessed "negative" behavior.

Thirty-two of the forty total responses fall within the "positive" behavior grouping. Therefore, the supervisors are clearly indicating that "positive" vertical behavior relationships exist for Plant C.

Intergroup behavior

A high degree of "positive" intergroup behavior relationship exists for the four work groups according to the responses of the supervisors. A total of thirty-two responses are reported in Table 20, twenty-two of which indicate "positive" behavior, four "general," and the remaining six fall within the "negative" behavior grouping. Three of the eight responses of supervisor 7 indicate "negative" behavior. Supervisor 7 described "negative" behavior being attributed to the informal intergroup communications (as did supervisor 1), cooperation and teamwork, and intergroup interaction patterns. Supervisors 1 and 5 also indicated "negative" behavior for their work groups vis-à-vis interaction patterns.

Behavioral profiles, based upon the supervisors' descriptions of their employees behavior, are included in Appendix F, Figures 76 through 79.

The supervisors' immediate subordinates' responses to the behavioral questionnaire are the topic of discussion in the last section of the chapter which follows.

Foremen and Other Salaried Personnel's Description of Employee Behavior

Table 21 reports the behavioral description of work groups 1, 5, 6 and 7, Plant C, based upon the perception's of the foremen and other salaried personnel of the same work groups. The discussion in this final section of the chapter follows the approach used previously in describing employee behavior.

TABLE 21

PLANT C AVERAGE RESPONSE OF FOREMEN AND OTHER SALARIED
PERSONNEL TO BEHAVIOR QUESTIONNAIRE DESCRIBING
EMPLOYEE BEHAVIOR BY VARIABLE
AND WORK GROUP

Variable	Work Group			
	1	5	6	7
<u>Individual Behavior</u>				
Job Involvement.	6.0	9	6.0	8
Commitment to Meeting Standards. .	6.4	3	7.5	6
Initiative	5.4	5	5.0	5
Self-Improvement	3.8	1	3.0	2
Work-Goal Commitment	4.4	1	7.5	7
Frustration Levels	5.7	7	7.0	8
Sense of Achievement	6.4	9	6.0	8
Absenteeism.	5.6	7	4.0	4
Turnover	6.1	3	8.0	8
<u>Intragroup Behavior: Lateral</u>				
Confidence and Trust	5.4	3	5.5	8
Job Related Communication.	4.7	7	7.0	9
Non-Job Related Communication. . .	5.4	9	6.0	5
Cooperation Patterns	5.0	6	7.5	7
Group Unity.	5.4	8	4.0	5
Interaction off the Job.	3.6	5	2.5	3
<u>Intragroup Behavior: Vertical</u>				
Trust and Confidence--Downward . .	6.4	9	7.0	7
Trust and Confidence--Upward . . .	6.4	7	7.0	8
Requested Information.	6.6	8	5.0	6
Communication Screening.	6.1	9	8.0	8
Job Information.	5.8	7	6.5	9
Human Relations Information. . . .	4.7	7	7.0	5
Cooperation and Teamwork	5.6	8	7.0	6
Acceptance of Immediate				
Supervisor Decisions.	6.9	7	7.0	6
Acceptance of Higher Level				
Management Decisions.	4.7	7	6.5	7
Acceptance of Staff Group				
Decisions	5.6	7	7.0	7
<u>Intergroup Behavior</u>				
Confidence and Trust	5.1	3	6.5	6
Communications Accuracy.	6.1	8	7.0	7
Communications Screening	7.2	7	8.0	8
Informal Communications.	4.6	6	5.0	4
Cooperation and Teamwork	5.6	7	7.0	7
Team Spirit.	6.2	9	8.0	7
Acceptance of Decisions.	5.0	7	7.0	6
Interaction Patterns	2.1	1	2.0	1

Individual behavior

In describing the individual behavior of work group 1 the responses were such to allow the group to fall totally within the "general" behavior grouping. Work group 5 indicated the highest number of "negative" characteristics for employees while at the same time indicating a like number of "positive" behavior factors. The employees were perceived as exhibiting a high degree of job involvement, low levels of frustration, a high sense of achievement, and having absenteeism only rarely affecting the groups' operations. All being oriented toward "positive" behavior. The four "negative" types of behavior were indicated for the variables measuring commitment to meeting standards, self-improvement, work-goal commitment, and turnover. Three of the four work groups; 5, 6 and 7, described individual self-improvement to be low -- falling within the "negative" grouping.

Basically, the work groups indicated a "general behavior pattern existing for the nine variables measuring individual behavior.

Intragroup lateral behavior

The responses to the six variables measuring intragroup lateral behavior indicate a definite "general" behavior orientation. Thirteen of the twenty-four total responses were within this grouping. Work group 1's responses were all in the "general" behavior classification.

Only three "negative" replies were indicated, two of which were in response to the question measuring interaction off the job by work groups 6 and 7.

Intragroup vertical behavior

None of the four work groups described their group's vertical behavior in a manner to allow the responses to be included in the

"negative" grouping. Work group 5 indicated "positive" behavior orientation to all ten variables within this category.

Group 6 was described as having only one behavior variable outside the "positive" grouping -- it was the question measuring requested information which fell within the "general" behavior area. Group 1 continued its basic "general" behavior orientation by replying to eight of the ten variables in this category in a way to allow the responses to fall within the "general" behavior grouping.

Considering the four work group's total responses together, the orientation is in the "positive" behavior direction.

Intergroup behavior

The intergroup interaction patterns were described as "negative" by each of the four work groups. The only other "negative" behavior response was indicated by work group 5 to the variable measuring intergroup confidence and trust.

Group 1 continued in attributing "general" behavior to its group, while the remaining three work groups were basically oriented toward "positive" behavior.

Figures 80 through 83, Appendix F, depict the behavioral profiles of the four work groups. The "positive-general" orientation of the work groups, based upon the foremen and salaried personnel's responses, is clearly highlighted in the profiles.

Chapter VI will contrast the structure, leadership, and behavior of the three plants in the research study.

CHAPTER VI

CONTRASTS AMONG THE THREE PLANTS

Introduction

The basic logic underlying this study is that if contrasts between the three plants in any one or more of the primary structural, mediating structural and leadership variables that were measured should exist, these differences will cause different behavioral patterns to develop. Likewise, similar situations in the structural and leadership contexts should result in like behavioral patterns.

This chapter is concerned with the contrasts in the structure, leadership, and behavior among the three plants in the research study. Primary emphasis is directed toward the different behavioral patterns that emerged as a result of the structural and leadership factors influencing their development. The approach to be followed is to describe and analyze the major differences in behavior between Plants A and B, between Plants A and C, and finally, between Plants B and C.

Since the three plants are a part of the same corporation, we would expect very similar inter-plant patterns in the structural elements to exist. This was generally the case. Differences in the leadership styles and competency within the three plants could partially mediate any adverse effects associated with dysfunctional structural elements.¹ The

¹See Fred E. Fiedler, A Theory of Leadership Effectiveness (New York: McGraw-Hill, 1967). See also, Arlyn J. Melcher and Thomas A. Kayser, "Leadership Without Formal Authority," California Management

same leadership styles and almost similar degrees of competency were exhibited within the three plants.

The behavioral patterns that resulted within the plants were very similar in each instance. Only individual behavior differed. The discussion in this chapter is in terms of the behavior differences existing among the three plants and their possible explanation, given the structural and leadership elements.

Differences in Behavior Between Plants A and B

Table 22 represents a summary of the structural, leadership, and behavioral factors of the three plants. The numerical values from the appropriate tables included in the previous three chapters were averaged, within the major categories shown in the table, and then reduced to descriptive terms depicting the situation instead of numerical representations.

The central thesis of the Melcher Model is that behavior is caused by identifiable variables. The primary and mediating structural variables and the leadership styles and competency of management are the influencing factors on individual, intragroup, and intergroup behavior. Table 22 summarizes these variables for the three plants of the research study. The only difference in behavior measured between Plants A and B is in the area of individual behavior. Plant A exhibits "general" individual behavior, while Plant B is characterized by "negative" individual behavior.

Review, XIII, No. 2 (1970), 57-64. Also, R. Likert, "An Emerging Theory of Organization, Leadership and Management," in L. Petrullo and B. Bass (eds.) Leadership and Interpersonal Behavior (New York: Holt, Rinehart & Winston, 1961), pp. 290-309. Also, see Paul R. Lawrence and Jay W. Lorsch, Organization and Environment (Homewood, Ill.: Richard D. Irwin, Inc., 1969), Chapters VIII and IX. Finally, see Alfred Chandler, Strategy and Structure: Chapters in the History of Industrial Enterprise (Cambridge: The M.I.T. Press, 1962).

TABLE 22

**SUMMARY OF STRUCTURAL, LEADERSHIP, AND BEHAVIORAL
FACTORS OF PLANTS A, B AND C**

	PLANT A	PLANT B	PLANT C
PRIMARY STRUCTURAL^a			
Size	Medium	Small	Small
Work Flow: Intragroup	Slightly Non-integrated	Slightly Integrated	Non-integrated/ Integrated
Work Flow: Intergroup	Non-integrated/ Integrated	Slightly Integrated	Slightly Integrated
S-P-T Factors: Intragroup	Fairly Concentrated	Concentrated/ Dispersed	Fairly Concentrated
S-P-T Factors: Intergroup	Fairly Dispersed	Fairly Dispersed	Slightly Dispersed
Work Demands	Moderate	Moderate	Moderate
Heuristics	Predictable	Predictable	Predictable
MEDIATING STRUCTURAL^b			
Formal Authority	Slightly Diffused	Slightly Diffused	Slightly Diffused
Control System	Institutional/ Individual	Slightly Individual	Institutional/ Individual
Information System: Intragroup	Simple/Complex	Simple/Complex	Simple/Complex
Intergroup	Simple/Complex	Simple/Complex	Simple/Complex
Vertical	Simple/Complex	Simple/Complex	Simple/Complex
LEADERSHIP STYLES^c			
Plant Manager	General	General	General
Supervisors	General	General	General
LEADERSHIP COMPETENCY^c			
Plant Manager	High	Moderately High	Moderately High
Supervisors	High	Moderately High	Moderate
BEHAVIOR OF THE SUPERVISORS SUBORDINATES^d			
Individual	General	Negative	Positive
Intragroup Lateral	Positive	Positive	Positive
Intragroup Vertical	Positive	Positive	Positive
Intergroup	Positive	Positive	Positive

^aFrom Tables 2, 8 and 14.

^bFrom Tables 3, 9 and 15.

^cFrom Tables 4, 5, 10, 11, 16 and 18.

^dFrom Tables 6, 12 and 20.

This difference between Plants A and B can be attributed to the size, intragroup work flow, intergroup work flow, intragroup s-p-t factors, and the control system variables. All other variables are alike between the two plants.

Size

The medium size of Plant A is associated with "general" individual behavior, whereas the small size of Plant B results in "negative" behavior. This is not in keeping with the majority of available literature.² Consistently the studies have shown that as size increases certain individual behavior factors decrease. That is, an inverse relationship exists between size and individual behavior. A study by Bales and Borgotta partially supports this apparent inconsistency.³ In the study very small groups were shown to exhibit more tension, agreement, and asked for opinions more than in the larger groups. The larger groups

²See James C. Worth, "Organizational Structure and Employee Morale," American Sociological Review, XV (April, 1950), 169-79. Also Howard Baumgartel and Ronald Sobol, "Background and Organizational Factors in Absenteeism," Personnel Psychology, XII (1959), 431-43. Also see R. W. Revans, "Human Relations, Management, and Size," in E. M. Hugh Jones (ed.) Human Relations and Modern Management, (Chicago, Quadrangle Books, 1959); Sherrill Cleland, The Influence of Plant Size Among Industrial Relations, (Princeton, N. J.: Princeton University Press, 1955). Also R. Marriott, "Size of Working Group and Output," Occupational Psychology, XXIII (January, 1949), 47-57. Also, see Lyman W. Porter and Edward E. Lawler III, "Properties of Organizational Structure in Relation to Job Attitudes and Job Behavior," Psychological Bulletin, LXIV (July, 1965), 34-43. Also Bernard P. Indik, "Some Effects of Organizational Size and Member Participation: Some Empirical Tests of Alternative Explanations," Human Relations, XVIII (November, 1965), 339-50. Finally, see Philip E. Slater, "Contrasting Correlates of Group Size," Sociometry, XXI (1958), 129-39.

³R. F. Bales and E. F. Borgotta, "Size of Group as a Factor in the Interaction Profile," in A. P. Hare, E. F. Borgotta, and R. F. Bales (eds.), Small Groups (New York: Alfred A. Knopf, Inc., 1955), pp. 396-413.

showed more tension release, giving of suggestions and information.⁴

If we accept the findings of the majority of the present field research studies, then some variable other than "size" is producing the "negative" individual behavior evidence in Plant B. One such possibility is work flow.

Work Flow: Intragroup and Intergroup

A slightly non-intergrated intragroup work flow exists in Plant A whereas a slightly integrated one is the situation for Plant B. The slightly integrated work flow exists also in Plant B for intergroup situations. Plant A had a non-integrated/integrated intergroup work flow.

Available literature on the dysfunctional consequences of specialization supports our findings of "negative" individual behavior in Plant B.⁵ It is apparently partially associated with the integrated work flow within and among the work groups of Plant B. But, attributing the negative behavior of Plant B to the degree of specialization would be an over simplification. The research literature reveals the possibility

⁴Ibid., pp. 405-13.

⁵See Charles R. Walker and Robert H. Guest, The Man on the Assembly Line (Cambridge, Mass.: Harvard University Press, 1952). Also see Chris Argyris, "The Individual and the Organization: An Empirical Test," Administrative Science Quarterly, IV, No. 2 (1959), 145-67. Also Charles L. Hulin and M. R. Blood, "Job Enlargement, Individual Differences, and Worker Responses," Psychological Bulletin, LXIX, No. 1 (1968), 41-55. Also see Jon M. Shepard, "Functional Specialization and Work Attitudes," Industrial Relations, VIII, No. 2 (1969), 185-94. Also Eaton H. Conant and Maurice D. Kilbridge, "An Interdisciplinary Analysis of Job Enlargement: Technology, Cost, Behavioral Implications," Industrial and Labor Relations Review, XVIII (April, 1965), 377-95. Also see John A. Goldthorpe, "Attitudes and Behavior of Our Assembly Workers: A Deviant Case and Theoretical Critique," Business Journal of Sociology, XVII (1966) 227-44. Finally, see S. Wyatt and J. N. Langdon, Fatigue and Boredom in Repetitive Work, (London: HMSO, 1937), Report No. 77, pp. 2-74.

of the existence of other causal variables influencing individual behavior other than the work flow factor. Two possibilities are the spatial-physical-temporal factors and the control system. Both variables are to be discussed in the following sections.

S-P-T Factors: Intragroup

The "general" individual behavior of Plant A is associated with fairly concentrated intragroup S-P-T factors. Plant B's "negative" behavior and concentrated/dispersed S-P-T factors are also related. A number of studies have dealt with the effects that spatial-physical factors have upon behavior, especially intragroup cohesion and intergroup conflict.⁶ The majority of studies dealing with the effects of spatial-physical barriers were concerned with intra- and intergroup behavior. For example, the studies concentrated on the effects on cooperation, interaction, and conflict.⁷ Nevertheless, we can assume that reduced cooperation, interaction, and increased conflict can generally result in less satisfaction, greater frustration, and a lowering of the level of job involvement and commitment exhibited by individuals.

Therefore, even though the extent of intragroup S-P-T factors for Plant B is far from being highly dispersed, it does contribute to the "negative" individual behavior evidenced for the plant.

⁶See Muzafer Sherif, B. J. White, and O. J. Harvey, "Status in Experimentally Produced Groups," American Journal of Sociology, LX (1955), 370-79. Also see Cara B. Richards and Henry Dobyns, "Topography and Culture: The Case of the Changing Cage," Human Organization, XVI, No. 1 (1957), 16-20.

⁷See John Gullahorn, "Distance and Friendship as Factors in the Gross Interaction Matrix," Sociometry, XV (1952), 123-34. Also see William A. Faunce, "Automation in the Automobile Industry: Some Consequences for In-Plant Social Structure," American Sociological Review, XXIII (1958), 401-7. Also Miles Patterson, "Spatial Factors in Social Interactions," Human Relations, XXI (1968), 351-61. Finally, see Robert Sommer, "Small Group Ecology," Psychological Bulletin, LXVII (1967), 145-52.

Control System

Plant A is characterized as having a combination institutional/individual control system. Plant B differs in that it has a slightly individual control system. The control system is the last variable to be analyzed as differing between Plants A and B and possibly contributing to the "negative" individual behavior evidenced in Plant B. The control system variable is comprised of three subvariables. Performance standards, measuring instruments, and the reward-penalty system. The research conducted in this area tends to be categorized into the three subvariables.

Much of the behavioral research on the effects of organizational control systems reveals a paradox for management. The more the organization attempts to obtain and exercise control over individual behavior the less control the organization actually has. Since the control function has broken down somewhat the organization feels compelled to institute still more control, and the cycle endlessly repeats itself. Three sociologists; Merton, Selznick, and Gouldner, have devoted a great deal of attention to the study of this phenomenon.⁸

The results of much of the literature on control systems reveal the effects on individual behavior as a result of the increased impersonalizing of the system. Organizational endeavors to institute a more formalized control system have the effect of producing human reactions which are expressed by increases in absenteeism, turnover, grievance rates, and slowdowns.⁹

⁸R. K. Merton, "Bureaucratic Structure and Personality," Social Forces, XVIII (1940), 560-68; P. Selznick, T.V.A. and the Grass Roots (Berkeley: University of California Press, 1953); A. W. Gouldner, Patterns of Industrial Bureaucracy (Glencoe, Ill.: Free Press, 1953).

⁹See Leo K. Hammond and Morton Goldman, "Competition and Non-Competition and Its Relationship to Individual and Group Productivity,"

A study by Miller and Hamblin¹⁰ partially explains the "negative" behavior indicated in Plant B. In their study, the effects of task interdependence (work flow) and rewards on productivity (job involvement, work-goal commitment, and commitment to meeting standards can be assumed to be related to the level of productivity) were tested. The results suggested that the slightly integrated work flow and individual control system present in Plant B can cause "negative" behavior.

The differences between the "general" individual behavior of Plant A and the "negative" individual behavior measured for Plant B cannot be totally ascribed to any one of the five variables which differed between the two plants. Rather it is the interaction of all five variables in conjunction with the variables between the two plants which are alike that produced the "negative" behavior of Plant B. The research findings show inconsistent effect of size on behavior and can be explained by this interaction.

Table 22 does not indicate the existence of any other contrasts between Plants A and B which would explain the behavioral pattern that emerged. Therefore, it can be assumed that the resulting behavior has been influenced by the factors previously discussed.

Sociometry, XXIV (1961), 46-60. Also see R. Marriott, "An Exploratory Study of Merit Rating Payment Systems in Three Factories," Occupational Psychology, XXXVI (October, 1962), 179-214. Also see Edwin A. Locke and Judith F. Bryan, "The Effects of Performance Goals in Level of Performance," Journal of Applied Psychology, L (1966), 286-91. Finally, see Andrew C. Stedry and Emanuel Kay, "The Effects of Goal Difficulty on Performance: A Field Experiment," Behavioral Science, II (1966), 459-70.

¹⁰L. Keith Miller and Robert L. Hamblin, "Interdependence, Differential Rewarding, and Productivity," American Sociological Review, XXVIII (1963), 768-77.

The next section is concerned with contrasting the behavior of Plants A and C and determining the variables that are influencing the behavioral patterns.

Differences in Behavior Between Plants A and C

Of the four major categories of behavior, only individual behavior between Plants A and C differed. Plant A exhibited "general" behavior whereas Plant C had "positive" individual behavior. Following the basic thesis of the model, this difference in behavior can be attributed to one or more of the structural and/or leadership variables measured. Inspection of Table 22 reveals that size, intragroup work flow, and intergroup work flow are the major contrasting variables between the two plants. Plant C also had two other variables that differed slightly from Plant A (S-P-T: intergroup and the leadership competency of the supervisors) but were not considered as significantly influencing the behavioral pattern which emerged; therefore, these are not considered in the analysis.

Size

The "small" size of Plant C vis-à-vis the "medium" size of Plant A partially explains the "positive" individual behavior of Plant C. The previously cited research literature on the influence of size on behavior supports this analysis.¹¹ But, as was already pointed out, the analysis of behavior cannot be adequately supported by the effects of one variable.

¹¹ For additional sources on the effects of size see Robert C. Ziller, "Group Size: A Determinant of the Quantity and Stability of Group Decisions," Sociometry, XX (1957), 165-72. Also see Paul Hare, "A Study of Interaction and Consensus in Different Sized Groups," American Sociological Review, XVII (June, 1952), 261-67.

The interacting influence of the contrasting work flows must also be considered.

Work Flow: Intra and Intergroup

The "general" individual behavior of Plant A is associated with a slightly non-integrated intragroup work flow and a non-integrated/integrated intergroup work flow. The "positive" individual behavior evidenced in Plant C is related to a non-integrated/integrated intragroup and a slightly integrated intergroup work flow. In both instances Plant C is to the right (toward the integrated end of the measurement continua) of Plant A.

The available literature on specialization concerning the problems associated with functional grouping and project departmentation at supervisory levels, generally suggests that a high degree of functional intragrouping contributes to "positive" behavior, while at the same time creating intergroup problems.¹² Generally, the effects on behavior evidenced in Plants A and C cannot be clearly ascribed to the degree of integration of their work flows. While they differ in individual behavior patterns, the difference in work flows is quite slight. On balance, the previously cited literature on the work flow effects on Plants A and B would indicate that Plant C should not exhibit "positive" behavior but rather Plant A. This contradiction in the research findings cannot be fully explained. Several possibilities may be that the influence of

¹²In addition to the previously cited literature on the effects of specialization refer to Louis E. Davis and Ernst S. Valfer, "Intervening Responses to Changes in Supervisor Job Designs," Occupational Psychology, XXXIX, No. 3 (July, 1965), 171-89. Also see Arthur H. Walker and Jay W. Lorsch, "Organizational Choice: Product vs. Function," Harvard Business Review, XLVI (1968), 129-38. Finally, see Melville Dalton, Men Who Manage (New York: John Wiley and Sons, 1964), 18-70.

intergroup S-P-T factors, which was deemed as insignificant, does in fact exert pressure on the behavior pattern of Plant C; another may be that the model itself does not account for some variable influencing behavior; or, the findings of previous research are in error.

Nevertheless, the interplant analysis ascribes the "positive" individual behavior of Plant C to the contrasting variables of size, intragroup work flow, and intergroup work flow. The last section of the chapter which follows describes and analyzes the contrasts between Plants B and C of the research study.

Differences in Behavior Between Plants B and C

Table 22 indicates that Plant B has "negative" individual behavior while Plant C is described as possessing "positive" individual behavior. The contrasting variables influencing the behavioral patterns are intragroup work flow, intragroup S-P-T factors, and the control system. The variables of intergroup S-P-T and supervisors' competency are not deemed to be significantly different, and are thus dropped from the interplant analysis.

Work Flow: Intragroup

The "negative" individual behavior of Plant B can partially be ascribed to the degree of integration in the intragroup work flow. Plant C, with "positive" individual behavior, has less integration (a non-integrated/integrated work flow) evidenced within the work groups of the plant. The literature previously cited supports this finding.

The analysis is further strengthened by considering the effects of the S-P-T factors on behavior.

S-P-T Factors: Intragroup

The degree of concentration is less for Plant B than is the case for Plant C. The research conducted on spatial-physical barriers has been fairly consistent in its findings. Generally, an increase in the degree of spatial-physical-temporal separation tends to be associated with an increase in frustration, a decrease in individual satisfaction, and a lessening of individual commitment.¹³

This describes the situation existing in Plant B with its "negative" individual behavior. The higher degree of concentration in Plant C is assumed to be influencing the "positive" individual behavior measured for Plant C.

Control System

Plant B, with its "negative" individual behavior, has a slightly individual control system. Plant C is characterized as possessing an institutional/individual control system. That is, a control system exhibiting some characteristics of an individual type, while at the same time possessing certain aspects of an institutional control system.

As was previously pointed out, much of the available literature pertaining to the effects of control systems on behavior generally supports the conclusion that "negative" behavior can result as a consequence of the dehumanizing aspects of the control system.¹⁴ The "negative"

¹³In addition to previously cited sources, refer also to Lee T. Burling, E. Lentz, and R. Wilson, The Give and Take in Hospitals, (New York: G. P. Putnam's Sons, 1956), 182-98. Also see Bernard Steinzor, "The Spatial Factor in Face to Face Discussion Groups," Journal of Abnormal Psychology, XLV (1950), 552-55. Finally, see Robert Sommer, "Further Studies in Small Group Ecology," Sociometry, XXVIII (1965) 337-48.

¹⁴For survey articles on control systems see: Richard A. Peterson and Michael J. Rath, "Structural Determinants of Piecework Rates," Industrial Relations, IV (1964), 92-103; Neil C. Churchill, William W. Cooper

individual behavior evidenced for Plant B results from the mutual interaction of the control system, intragroup S-P-T factors, and the intragroup work flow variables.

The contrasting and comparison of the three plants in the research study resulted in a fairly consistent literature support of the behavioral patterns present in the plants. A summary of the research study and its conclusions will be the topic of the last chapter which follows. In addition, the question of the model's operation feasibility and value in empirical research will be discussed.

and Trevor Sainsbury, "Laboratory and Field Studies of the Behavioral Effects of Audits," Bonini (ed.), et al., Management Controls (New York: McGraw-Hill Book Co., 1964), 253-67; Harold Kelly and John Thibout, "Experimental Studies of Group Problem Solving and Process," in G. Lindzey (ed.), Handbook of Social Psychology (Reading, Mass.: Addison-Wesley, 1954), pp. 735-85.

CHAPTER VII

SUMMARY AND CONCLUSION

Summary

The primary objective of this study was to describe the behavioral patterns existing, within each of three manufacturing plants in terms of influencing forces, by employing a multivariate organizational behavior model. The model identified the influences of primary structural, mediating structural, and leadership as the independent variables. The dependent variables were the individual, lateral intragroup, vertical intragroup, and intergroup behavior dimensions. The analyses of the emerging behavioral patterns focused on the contrasts between the three plants. Previous research findings were used to support or contradict the results obtained in this study.

The three manufacturing plants were geographically dispersed and a part of the same corporation. Only the salaried personnel of the plants participated in the study. Questionnaires and personal interviews were used to collect the necessary data for the study. All departments, or work groups, in each of the three plants were fully described as to the primary and mediating structural, leadership, and behavioral variables which existed at the time of the study. Summary profiles depicting graphically the data obtained were also included.

This exploratory study, as was previously noted, was concerned with the description of the existing structure, leadership, and behavior within each of three plants and the analyses of the emerging behavioral

patterns among the plants. In addition, the study had a secondary purpose to utilize a new "systems" model and then to arrive at some conclusions as to its operational feasibility in empirical research. The conclusions reached regarding the inter-plant behavioral comparisons and the model's usefulness for research is the topic of the next and final section of this study.

Conclusion

The basic validity of the model was assumed because of the theoretical and research base upon which it rests. The model integrated the work of many researchers who identified the variables influencing behavior within organizations. The analyses of the behavioral patterns evidenced in the three plants and the variables which influenced their development were found to be almost entirely in keeping with the research in the numerous studies that were cited. The writer recognizes that many more research studies supporting the analyses could be cited. Omissions of conflicting evidence, that are also present in the growing literature on organizational behavior, probably did occur. In keeping with the limitations of the study it was the researcher's judgment to include only the most widely known and acceptable research.

A clear advantage in the use of the model is that description and analyses become a straightforward procedure. The researcher is able to describe the situation in terms of the variables and then analyze the resultant behavior. A search of the literature would reveal the consistencies and differences between the various studies and that of the researchers. The possibility of additivity in various research efforts is increased substantially when a common frame of reference is utilized.

The model's ease in collecting data was evidenced in that, on the average, only one hour was needed for the respondents to complete the questionnaires. In using questionnaires for the data collecting instruments, where the participants are requested to give their own perceptions, researchers assume that the subjective evaluation of the participants approximates objective reality.

As was previously noted the structural questions of the model had not been developed at the time of this study. Based upon the glossary definitions of the structural elements of the model, questionnaires were developed to measure all the primary and mediating structural variables and subvariables. The decision to use not only observation and interviews to collect the structural data but also questionnaires was based on the fact that information from all the participants of the study would enhance the degree of confidence the researcher would have in the results pertaining to the non-personalized structural aspects of the plant.

Several important conclusions regarding the model's use in empirical research had been established as a result of this study. Probably the single most important fact is the necessity to clearly, specifically, and consistently define the work groups, or units, that are being studied. This point cannot be stressed enough. Analyses completely break down if the researcher, before collecting data, has not established his research design and strategy. The participants in the study must understand to whom and to what group they are to direct their responses. For example, consider the following behavior question from the model:

"Are employees involved in their job? For example, do they try to do the job thoroughly, and take pride in their work?"

How is the respondent to answer this question pertaining to individual job involvement? Is he to consider all employees? Only those in his department? Or only his immediate subordinates or peers as the case may be? It is apparent from this that the definitions and composition of the various units under study must be clearly delineated and understood by all participants.

A further conclusion as a result of the study has to do with the best strategy to employ in collecting data. All the questionnaires were administered at the same time -- the primary structural, mediating structural, leadership, and behavioral. Since the structural questions required non-personal types of responses (unlike the personal opinions and perceptions of the leadership and behavioral items), they should have been administered prior to the completion of the leadership and behavioral questionnaires. The structural questionnaires could even have been completed off the job and with the possibility of more time devoted to their completion. The chance of a lower return rate does exist but since the completed questionnaires, observation, and interviews were used this is not a critical factor. Administering the leadership and behavioral questionnaires to as large a group as possible has inherent advantages vis-à-vis the return rate, control over the situation, clarifying any possible misunderstanding, time required to complete, etc.

The previous conclusions were the major ones associated with the model's use in a field research problem. Acceptable research strategy was followed during the study and doesn't require discussion or conclusions to be reached for the purposes of this study.

The Melcher Model is a complex framework dealing with a very complex situation -- organizational behavior. The synthesis and integration of

the research accomplished by Melcher is a worthwhile and necessary undertaking. Whether the model adequately represents objective reality has still to be proved by more research employing the model. The overwhelming complexity of analyzing behavior becomes apparent when the reader refers to the numerous tables in the study which represent the data collected for the dependent and independent variables of the model. If a study were directed at small units and only a few levels, the degree of complexity associated with the analyses of the emerging behavior would be much less.

Besides the complexities associated with a total organizational analyses is the fact that some important necessary understanding of what exists within a unit is lost when the researcher aggregates and treats the organization as a whole and does not view it as being composed of many smaller units. The changes that are required should be directed at that unit which exhibits the dysfunctional aspects management views as needing alteration, and not engage in across-the-board change programs. The value then in the use of the model is to confine the research to the narrowest possible scope. There is little practical use to the decision maker for information about the total organization without the accompanying data about the units and sub-units comprising the organization. Change must take place where it does the most good and where it is required.

Although this exploratory study did not utilize statistical techniques, further research needs to be conducted concerning the basic assumptions and the initial conceptualization of the variables of the model. The model assumes the primary and mediating structural, and leadership as the independent variables with the behavioral variables

as the dependent variables. There is no way to determine in the present study if we measured the variables we thought and if the relationships among the various variables exist as assumed. Therefore, the analysis that was conducted in the study is limited in its attempt to interpret the apparent differences among the three plants. We are able to analyze the general direction of influence but not the relative strengths of the relationships. The absolute effect on behavior can be discerned but the question of the level of significance between the variables under analysis is moot.

Further research on data collected by utilizing the model can be subjected to multivariate statistics with the extremely laborious computations required easily handled by the computer. This approach will then allow the behavioral scientist to search and test the functional relationships he is striving to explain and predict.

GLOSSARY

THE MELCHER ORGANIZATIONAL BEHAVIOR MODEL¹

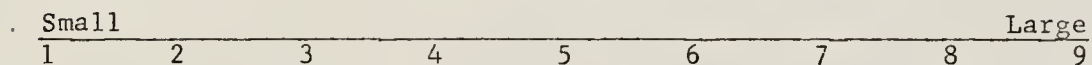
Primary Structural Variables

Size: Small to Large

The size of the formal unit is defined as the number of subordinates formally assigned to the unit. In other terms, it is the number of employees for which the supervisor or executive is responsible. This includes those directly reporting to him and those at lower levels in his group. Thus, the size of groups varies, depending on the level of organization one is studying (higher the level, the greater the number) and absolute number at each level.

The size of an organization may be defined in terms of a continuum. To translate absolute numbers into an analytical scale requires some breaking points. These have been defined for subgroupings to occur where stress sharply increases. A further distinction is made between levels.

Size Continuum



¹The glossary is from a mimeographed work on the model by Dr. Arlyn J. Melcher, Professor of Management, Kent State University, Kent, Ohio. The glossary applies only to the primary, mediating, and leadership variables and sub-variables.

Table 23 provides the data for classifying a unit along the continuum. Levels are defined from the bottom, with first line supervisor as level one.

TABLE 23
NUMBER OF INDIVIDUALS IN A FORMAL UNIT AND THE CORRESPONDING
VALUES ON A SIZE SCALE

No. of Levels	Size Scale								
	Small 1	2	3	4	5	6	7	8	Large 9
1	1-5	6-10	11-15	16-20	21-25	26-30	31-35	36-40	41-
2	1-30	31-60	61-90	91- 120	121- 150	151- 180	181- 210	211- 240	241-
3	1- 125	126- 250	251- 375	376- 500	501- 625	626- 750	751- 875	876- 1000	1000-

Work Flow: Nonintegrated to Integrated

Work flow is defined as the input-output relationships among formal positions and formal units. The work flow relationships among formal positions may be viewed in terms of a continuum ranging from nonintegrated to integrated work flow.

A nonintegrated work flow exists where each unit (office, section, or larger formal group) is unrelated in terms of input-output of resources. Each office of the formal unit obtains its resources and distributes its output outside the organization. An integrated work flow exists where the output of one position, or unit, becomes the input for the next position and/or organizational unit. Further, the second unit cannot proceed until it receives the input.

Work Flow Continuum

Nonintegrated					Integrated				
1	2	3	4	5	6	7	8	9	

Work flow sub-variable: intragroup

The degree of integration within a group is operationalized by averaging the following factors:

Work Flow Scale: Intragroup

	1	2	3	4	5	6	7	8	9
Job Specialization	Little							Extensive	
Interdependence	None							Extensive	
Buffers	Extensive							Few	
Job Interchangeability				Extensive				Little	

Job specialization.--The members of a group may each perform specialized tasks such as on an assembly line.

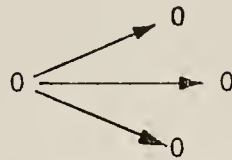
Job Specialization Scale

1	2	3	4	5	6	7	8	9
Little Specialization				Moderate				Extensive Specialization

Interdependence among positions.--Where an interdependent work flow exists, we may find a position is serial related to only one position, i.e., provides services or generates other inputs for only one position, e.g.:



Contrarily, a position may serve a number of others in the group. For example, a secretary may have a multiple relationship in that she works for many persons, e.g.:



Interdependence Among Positions Scale

1	2	3	4	5	6	7	8	9
None--				Moderate			Extensive--	
Don't provide inputs for other group members							many are dependent upon the output of a position	

Buffers between positions.--Where interdependence exists among positions, there may be different levels of inventory or buffers between positions that permit individuals to continue to work even when breakdowns occur, or others are absent. For example, there may be a backlog of work that needs to be done, or other methods of reducing short-term interdependence such as switching to another type of work.

Buffers Between Positions Scale

1	2	3	4	5	6	7	8	9
Extensive--				Moderate			Few--	
many ways of making daily or weekly adjustments to breakdown in work flow							little that can be done when breakdown in work flow	

Degree of job interchangeability.--Where specialization exists, there may be varying degrees that group members can do each other's

jobs. On the one hand, most members may be trained to do any job in the group; contrarily, most individuals may be able to only handle their own specialized job.

Degree of Job Interchangeability Scale

1	2	3	4	5	6	7	8	9
Extensive--				Moderate--				Little--
most have				at least half				few would be
ability to				the jobs could				able to do
do each other's				be performed				other's jobs
job				by two or more				
				persons				

Work flow sub-variable: intergroup

The degree of interaction between or among groups is operationalized by averaging the following factors:

Work Flow Scale: Intergroup

	1	2	3	4	5	6	7	8	9
Job									
Specialization			Little					Extensive	
Interdependence			None					Extensive	
Buffers			Extensive					Few	

The continua and definitions used for Work flow: intragroup should also be used for Work flow: intergroup.

Spatial-Physical-Temporal Factors: Concentrated to Dispersed

The spatial-physical-temporal (S-P-T) factors make reference to the extent to which individuals are grouped or separated by distance, spatial orientation, physical barriers, time, or noise.

On the one extreme, individuals would be close together and able to interact on a face-to-face basis. An example would be where

individuals are positioned around a table with no physical barriers between them. At the other extreme, individuals would be separated by distance, physical barriers, or time.

Spatial-Physical-Temporal Factors Continuum

Concentrated							Dispersed	
1	2	3	4	5	6	7	8	9

Spatial-physical-temporal sub-variables

Intragroup.--The degree of S-P-T concentration within a group is operationalized by averaging the following factors:

S-P-T Scale Intragroup

	Concentrated						Dispersed		
	1	2	3	4	5	6	7	8	9
Distance	Little						Extensive		
Spatial Orientation	Direct						Indirect		
Walls or Partitions	None						Extensive		
Floors	None						Extensive		
Time	None						Extensive		
Noise	Low						High		

Distance Among Group Members

1	2	3	4	5	6	7	8	9
Little-- most members are within talking distance				Moderate-- half are within talking distance			Extensive-- Practically nobody is within talking distance	

Spatial Orientation Among Group Members

1	2	3	4	5	6	7	8	9
Direct-- most mem- bers are located face-to-face				Partial-- side-by-side relationship among most members			Indirect-- back-to-back relationship among most members	

Separation Among Group Members by
Walls Or Partitions

1	2	3	4	5	6	7	8	9
None-- no walls or other barriers				Partial-- some barriers between about half of the group but none between the rest			Extensive-- scattered on different floors	

Separation of Group Members by Time Schedule

1	2	3	4	5	6	7	8	9
None-- beginning quitting hours, lunch hours, coffee breaks are scheduled at same time				Partial			Extensive-- wide differ- ences in scheduling of working hours, coffee breaks, and lunch hours for group members	

Separation of Group Members by Noise Level

1	2	3	4	5	6	7	8	9
Low Noise				Moderate			High Noise	

Intergroup--The degree of S-P-T concentration between or among
groups is operationalized by averaging the following factors:

S-P-T Scale: Intergroup

	<u>Concentrated</u>								
	1	2	3	4	5	6	7	8	9
Distance	Little						Extensive		
Spatial Orientation	Direct						Indirect		
Walls or Partitions	None						Extensive		
Floors	None						Extensive		
Time	None						Extensive		
Noise	Low						High		

The continua used for S-P-T: intragroup should also be used for S-P-T: intergroup.

Work Demands: Stable to Unstable

There may be broad stability or instability in the demands that face workers or management in their jobs during each day, each week, or for an even longer period of time. Factors affecting the degree of stability are the continuity of the work cycle, fluctuations in the rate of production, and exogenous factors such as machine breakdowns, in addition to the nature and changes in technology.

The continuity of the work cycle would affect work demands. There may be short production runs of a product, or continuous runs. Short production runs may be the consequence of management policies, such as carrying broad varieties of a product line (sizes, quality, style, . . .), producing to order (rather than anticipating orders and producing partly for inventory), or interrupting production orders in process to provide special service to important customers. In other cases, short production runs may be the consequence of the very nature of the industry. For an

example, would be a job shop which has a relatively short production orders, ranging from a few units to a few hundred. At the other extreme, there would be continuous runs of an item, such as is approached in a gasoline refinery and in some chemical plants.

Fluctuations in the rate of production affect work demands. There may be high stability in the rate of production, or different rates at which an item is produced through time. This variation may occur because of exogenous factors such as changes in sales, material shortage, unpredictable occurrences of technical problems, and other similar events.

The nature and changes in technology may affect work demands. The way in which the product is produced may change, as in such instances where new types of machinery, materials, or different processes are introduced. In contrast, the technology may be well developed, in which case little change is required through time.

Work Demands Continuum

Stable									Unstable	
1	2	3	4	5	6	7	8	9		

Work demands sub-variables

The variability of work demands is operationalized by selecting one of the following:

Stability of Work Demands During Each Hour

1	2	3	4	5	6	7	8	9
High-- demands are usually stable from hour-to-hour				Medium-- demands are stable about half the time				Low-- unstable and fluctuating demands from hour-to-hour

Stability of Work Demands During Each Day

1	2	3	4	5	6	7	8	9
High-- demands are usually stable during the day				Medium-- demands are stable about half the time			Low-- unstable and fluctuating demands occur during the day	

Stability of Work Demands During Each Week

1	2	3	4	5	6	7	8	9
High-- demands are usually stable during the week				Medium-- demands are stable about half the time			Low-- unstable and fluctuating demands occur during the week	

Stability of Work Demands During Each Month

1	2	3	4	5	6	7	8	9
High-- demands are usually stable from week-to-week				Medium-- demands are stable about half the time			Low-- unstable and fluctuating demands occur from week-to- week	

In operationalizing this variable one should select one of the above time periods which is most appropriate to the case being analyzed.

Heuristics: Predictable to Unpredictable

Heuristics are defined in terms of the predictability of outcome of actions or decisions. This may vary from predictable to unpredictable.

Heuristics are also closely associated with the search procedure(s) necessary to solve problems or make effective decisions. If the consequence of particular actions is predictable, the generation and selection among alternatives (the search procedure) should be routine and trivial.

While the problem may be complex, the individual can systematically work out the solution. An engineer constructing a large bridge may be able to use methods that are well developed, and this would appear to be the situation for many of the tasks facing professional technicians--chemists, surgeons, engineers, etc.--as well as operating employees in most dimensions of their jobs.

Contrarily, if consequences of projected actions or decisions are unpredictable, the search procedure is likely to be unsystematic and have many elements of randomness to it. There may be no useful heuristics for solving the problems except to draw upon one's experience and background, trial and error, or judgment. The treatment of mental patients, transplants of vital organs from one body to another, developing a new form of material, some forms of technical problems and the like, are the types of problems that require new approaches, creativity, and a certain amount of random search for a solution.

Heuristics Continuum

Predictable				Unpredictable				
1	2	3	4	5	6	7	8	9

Heuristics sub-variables

The variable is operationalized by averaging the answers to two questions: 1) The first measures the knowledge each individual has in carrying out assigned tasks and problem solving. 2) The second measures the resources of others of which he is aware and can draw upon for help.

Predictability of actions question.--In some jobs things are fairly predictable--if you do something, you know what will happen. In others you often are not sure whether something will work or not. What per cent of the time would you say that you are sure whether something you do will work?

Almost Always		Usually		Often		Sometimes		Seldom
1	2	3	4	5	6	7	8	9
90%	80	70	60	50	40	30	20	10%

Availability of help from others question.--In some jobs things are fairly predictable--if you do something, you know what will happen. In others you often are not sure whether something will work or not. What per cent of the time would you say that you are sure whether something you do will work?

Almost Always		Usually		Often		Sometimes		Seldom
1	2	3	4	5	6	7	8	9
90%	80	70	60	50	40	30	20	10%

Availability of help from others question.--Sometimes, even though you don't know how to handle a problem, you can go to someone else in your group or elsewhere for reliable help. In other cases, nobody else is likely to be able to provide any reliable help. What per cent of the time can you go to others for reliable help when you are at a loss on how to solve a problem?

Almost Always		Usually		Often		Sometimes		Seldom
1	2	3	4	5	6	7	8	9
90%	80	70	60	50	40	30	20	10%

Mediating Structural Variables

Formal Authority Relationships: Diffuse to Specific

Authority is defined as the formal jurisdiction over decisions. The right to make final decisions is referred to as line authority. The right to advise others on decisions is defined as staff authority.

Functional line authority is the right to make final decisions in a specialized area. If a specialist group, such as the personnel department, is given the final authority to hire new employees, it has functional line authority over hiring. If the personnel department has only advisory authority over hiring, it has functional staff authority in the area.

The formal authority relationships may be left largely unspecified and diffuse, or may be defined in detail and be quite specific. These relationships exist both laterally and vertically.

The three major elements that make up the formal authority relations are: (1) Levels: few to many, (2) Delegation: decentralization to centralization, and (3) Departmentation: autonomous to interdependent. Each of these dimensions is defined in terms of authority.

Formal Authority Continuum

<u>Diffuse</u>								<u>Specific</u>	
1	2	3	4	5	6	7	8	9	

Formal authority relationships sub-variables

The degree of formalization of authority relationships is operationalized by averaging the following factors.

Levels: few to many.--Organization levels are the hierarchial differentiation among offices. Organizational levels (and the relative level one position occupies vis-à-vis another) are defined by the assignment to an office, line authority over other offices. This determines the superior-subordinate relationship.

To determine the absolute number of levels in the unit under consideration, count the number of levels in the direct chain of command

to the top administrative officer. (Count the supervisor at the bottom of the organization as number 1.)

Two subtle factors that have a bearing on the rating of levels in the unit under consideration are:

- a) status symbols designated as part of the office (such as titles, carpets, private secretary, nature of office furniture, salary, etc.), and
- b) the office to which one reports. In a well-designed organization structure, each of these factors supports each other. More status symbols are assigned to offices with broader authority. Offices with broader authority report to higher level executives.

In order to determine the rating for the levels continuum first consider the absolute number of levels in the unit under consideration. Then, modify this in light of the subtle factors above, if applicable.

Levels Scale

Few									Many
1	2	3	4	5	6	7	8	9	

Delegation: decentralization to centralization.--Delegation is defined as the distribution of authority among levels in an organization, i.e., the degree that the organization is decentralized or centralized. A completely decentralized structure is one in which operating employees have the right to make all the decisions, i.e., complete delegation of authority. A completely centralized organization is where the top executive has the right to make all the decisions, i.e., retains all authority. An ongoing organization will have some balance between those extremes.

Delegation Scale

Decentralization					Centralization			
1	2	3	4	5	6	7	8	9

A completely decentralized organization would be achieved only if, at each level in the organization, there were complete delegation down to the next level. In practice, this doesn't occur. Instead, each level of supervision partially restricts the degree of discretion subordinates may exercise. Thus, employee freedom diminishes, or is reduced, as one moves from the highest to the lowest levels of organization.

The principal means of reserving decisions for top management, and providing parameters on those at each level, is through statement of policies (including job descriptions), procedures, and rules. Each level of management may add further restriction. In a bank, for instance, the policy may be that loans may be approved by the Board of Directors. This defines the degree of centralization and decentralization in respect to loans.

Degree of delegation is measured at each level in the organization. It is measured by two principal factors:

- a) the percentage of decisions permitted that do not require consultation with immediate or higher level supervisors.

Decentralized					Centralized			
1	2	3	4	5	6	7	8	9
89-100%		67-77%		45-55%		23-33%		0-11%

- b) The degree of discretion that the policies, procedures, and rules permit in making decisions; (that is, the extent to which formal parameters of policies, procedures and rules

broadly restrict decisions; or in contrast the degree to which they sharply restrict decisions to routine matters and implementation).

Decentralization					Centralization			
1	2	3	4	5	6	7	8	9
Extensive			Moderate			Restricted		

"Extensive discretion" refers to those individuals who have broad discretion in making decisions; there is general flexibility to adjust to local conditions, special situations and implement different ideas in performing the job assignment; higher level supervision broadly relies upon judgment, general competence and adherence to professional standards to orient the individual in doing his job properly.

"Moderate discretion" refers to the policy and procedure statements and rules covering most of the important decisions in the job; there is, however, some discretion to adjust to local conditions, special situations and opportunity to implement new ideas in performing the job assignment; there is some reliance upon the judgment, general competence and adherence to professional standards to orient the individual in doing his job properly.

"Restricted discretion" means the policies, procedures and rules that limit discretion in decision-making to routine, unimportant details; there is no leeway for adaption to local conditions, special situations, or different ideas in performing the job assignment; there is practically no reliance upon the individual's judgment, general competence, and adherence to professional standards to orient the individual in doing his job properly.

Departmentation: autonomous to interdependent.--Departmentation is defined as the formal authority relationships among formal groups. Departmentation may range from completely autonomous--where no department

has authority over any other department--to completely interdependent--where each department has partial authority over each of the other departments.

Departmentation Scale

Autonomous				Interdependent				
1	2	3	4	5	6	7	8	9

Where a department neither has authority over other departments, nor other departments have authority over it, this is defined as autonomous. In industrial organizations, criteria that lend themselves to establishing autonomous units (or influence movement toward the autonomous end of the continuum) are customer, product, and geographic division. However, functional departments may also be autonomous. This would occur, for example, when a research department is assigned responsibilities to develop a product, but is not given the authority over other groups whose services are required to carry out the research function (i.e., chemistry labs, personnel department, purchasing, etc.).

At the other extreme, an interdependent department is created when each department is assigned partial authority over all other departments. In this extreme, each office is assigned duties and authority over a single function in other departments. The right to make decisions on a complete task is allocated among all departments.

For example, finance and production are two departments within manufacturing firms that characteristically have a line authority relationship over each other and other departments. Finance, for instance, may be assigned line authority over capital expenditures and, in this case, would approve or disapprove expenditures proposed by production. Yet, in all probability, those in production still are held accountable for performance (meeting various standards--time,

quality, quantity, cost) even though finance's decisions may create difficulties in meeting those standards. Production, in turn, may have authority to make decisions that make it difficult for finance to meet its performance standards. For instance, production may have authority to determine inventory levels, credit policies, or other decisions that constitute capital drains, even though finance is held accountable for allocating capital on an optimum basis.

The degree of departmentation is measured between or among units. It is measured by two principal factors:

- a) In the group's area of specialty-responsibility, does it have the authority to make decisions for other departments; e.g., to what extent must other departments obtain its formal approval on decisions?

Autonomous						Interdependent			
1	2	3	4	5	6	7	8	9	
Little-- can only advise				Moderate-- can make some important de- cisions but can only advise on most important decisions			Extensive-- have line authority to make most decisions		

- b) In their area of specialty-responsibility, do other departments have the authority to make decisions that affect the group, e.g., personnel may have final authority over whom the unit hires, fires, or promotes; engineering may determine quality specifications, etc.

Autonomous						Interdependent			
1	2	3	4	5	6	7	8	9	
Little-- can only advise				Moderate-- can make some important decisions but can only advise on most impor- tant decisions			Extensive-- have line authority to make most decisions		

Control System: Institutional to Individual

The control system is defined as the formal system for evaluating performance, including (1) standards that are established, (2) formal measuring instruments to be used to determine if these standards have been achieved, and (3) the formal system for allocating rewards-penalties for various levels of achievement. The control system would range along a continuum from institutional to individual system.

Control System Continuum

Institutional									Individual	
1	2	3	4	5	6	7	8	9		

The institutional system exists when there are no formal specifications of standards, measuring instruments, or differential allocation of rewards-penalties based upon individual performance. The individual system exists when formal standards are set for individuals, formal measuring instruments are designed to evaluate individual performance, and the formal reward-penalty system is designed to reward or penalize on the basis of differential individual performance levels. Each of these dimensions will be more fully developed below.

Control system sub-variables

The degree of institutionalization of the control system is operationalized by averaging the following factors:

Performance standards.--Standards such as time, cost, quantity, quality, or other aspects of performance expected of each individual, or group may be specified in varying degrees. These may range from vague and undefined statements on what is expected to clear, precise, well-defined statements of expected performance standards.

On the one hand, no standards are explicitly defined by management--either in formal policy statements or otherwise--before the activities or assigned duties are carried out. (There may be, and most likely are, informal norms that are set by the individuals or the groups. These, however, are not included as part of the formal standards.) In the other extreme, time, cost, quality, quantity, or other ends would be specifically defined. This is operationalized by the following:

Performance Standards Scale

1	2	3	4	5	6	7	8	9
Undefined-- standards are nearly all vague and ambiguous				Moderately-- clear with some vagueness			Well defined-- standards mostly clear and unambiguous	

Measuring instruments.--Measuring instruments are the means used to measure performance levels of the group as a whole, of subgroups, or of individuals. This may range from where, on the one hand, few elements of a formal system exist and management relies on informal methods to measure individual performance. Contrarily, there may be a well-designed system for continual measurement of performance achievement level and little reliance on informal methods.

In teaching, for instance, the standards may be established that measure the extent to which such standards are approached. On the other hand, a formal measurement system may be designed to directly assess levels of individual performance. Individual examinations in a classroom setting, for instance, are formal measuring methods used to assess levels of individual performance. This is operationalized in the following:

Measuring Instruments Scale

1	2	3	4	5	6	7	8	9
No formal instruments-- only poor measures of individual performance				Moderate-- a few good measures of individual performance				Highly formal-- numerous good measures of individual performance

Reward-penalty system--Reward-penalties may be granted on a basis that is largely directly related, or unrelated, to performance levels. Precisely defined standards and measuring instruments that directly evaluate performance are prerequisites for rewarding performance. Rewards-penalties may be allocated with or without the use of standards and measuring instruments.

Reward-Penalty System Scale

Institutional								Individual	
1	2	3	4	5	6	7	8	9	

On the one hand, rewards-penalties may be allocated on an undifferentiated basis to everyone by virtue of their membership in the organization. Examples of these are such fringe benefits as pensions, hospital and insurance plans, recreational facilities, cost-of-living increases, across the board upgrading, profit sharing plans, undifferentiated hourly rates, or salaries. In some cases, rewards may be differentiated, but unrelated to performance levels, as when promotions, salary level, raises, etc., are made on the basis of family ties, friendship, college ties, common religion, and the like.

On the other hand, individual performance is rewarded. Typical examples are piece-rate systems, promotion for outstanding performance, or special recognition given because of an exceptional contribution.

This variable is operationalized by averaging the following two factors:

Rewards (salary increases, promotions, special recognition, and privileges) may be granted on a basis that has little relation or a direct relation to performance levels.

Reward System Scale

1	2	3	4	5	6	7	8	9
Little				Partial				Direct

"Little relationship" refers to the fact that there seems to be little relationship between how good a job one does and the amount of raises that are received, promotions given, or special recognition granted.

"Partial relationship" is a mixed picture; if one does an outstanding job, he usually will receive recognition, raises and a chance for promotion; others, however, may do a relatively poor job and still be rewarded on the basis of seniority, friendship or special ties with key people.

"Direct relationship" infers that if one does a good job he nearly always receives recognition, rewards, and chance for promotions; if he does a poor job, he nearly always will not. Seniority or special connections are important only when decisions could go either way.

Penalties (taking away of special privileges, salary reductions, demotions and firing) may be applied on a basis that has little relation or a direct relation to performance levels.

Penalty System Scale

1	2	3	4	5	6	7	8	9
Little				Partial				Direct

Information System: Simple to Complex

An information system is defined as the formal network of receiving and transmitting centers and the formal communication relationships that exist among them in an organization. These centers may be either individuals, formal offices in an organization, or machines such as computers or other computational devices. The system may be simple, i.e., there is little or no formal system and reliance is upon spontaneous or unrationalized methods. On the other hand, the system may be complex such as where each dimension of the relationship is rationalized and defined. Attention is directed at intragroup, intergroup and vertical relations in operationalizing this variable.

Information System Continuum

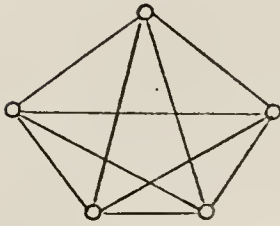
<u>Simple</u>									<u>Complex</u>	
1	2	3	4	5	6	7	8	9		

Information system sub-variables

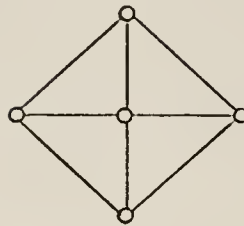
The elements of the system are (1) the directness of communication links among people, (2) the density, or number of channels that may be used to transmit data from one person to another, (3) programs for transmitting data from person to person; and, (4) the data storage-retrieval system. In operationalizing the variable, a distinction is made between intragroup, intergroup, and vertical information systems.

Intragroup communication center linkage.--One important dimension of the relations among people is the directness of communication links. This may vary from where there is formal provision for direct linkage among all people to where linkage among people is through two or more intermediaries (i.e., indirect linkage).

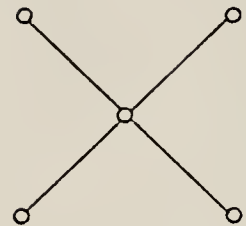
Direct (Complete)



Partial (Wheel)



Indirect (Hub)



In the direct linkage, each person is directly linked to every other person. It is also possible to go through a wide variety of relay points. In the wheel, a central clearing point is established, but those people at each communication point have the choice of some direct contacts or going through different relays. In the hub, communication among people is sharply restricted. Only the hub person is in direct contact with all other people; communication among the others must be relayed through the hub person.

Intragroup Communication Linkage Scale

1	2	3	4	5	6	7	8	9
Direct contact				Partial			Indirect--	
with each							contact among	
other's position							positions	
							through one	
							or more	
							intermediaries	

Intragroup channel density.--There may be few authorized ways of communicating with any other individual within the group at the same, higher, or lower level in the organization. For example, it may be necessary to rely upon any number of authorized ways including meetings, face-to-face in informal meetings, bulletin boards, or formal memos or notes.

Intragroup Channel Density Scale

1	2	3	4	5	6	7	8	9
Single-- only formal channels are authorized							Multiple-- use any means that is useful	

Intragroup transmission time.--There may be programs to transmit information on a real time basis or a delayed basis. Real time systems transmit the data as the event occurs. Delayed time systems deal with batched or accumulated data.

The different ways of designing an information system in respect to inventories illustrate the delayed and real time systems. If inventories are determined at the end of the year, this would be an extended or delayed time system. Where reports are composed quarterly, this would be somewhat further towards the real time system. Where reports are prepared monthly, this would move the system closer to real time; weekly reports even more so, and when prepared daily, much closer to real time yet. When inventory changes are added or deducted from inventory balance immediately, and the information transmitted to those concerned, then a real time system exists.

This is determined as follows:

Individuals may be authorized to transmit information to other positions as it occurs (real time); in contrast, they may transmit the data periodically, i.e., batching of data and transmitting it on delayed time basis.

Intragroup Transmission Time Scale

1	2	3	4	5	6	7	8	9
Real time							Delayed time	

Intragroup storage-retrieval system.--The storage-retrieval system refers to the formal system for storing data and making it available when needed. The elements of the system are the files or other methods for storing data, the redundancy of the system at different levels (section, department, plant, headquarters), and at different units in the organization, authorized access to the information at these points and the program for ordering and coding the data to permit its location and retrieval.

- a) Files. The capacity for storing data may be limited principally to memories of individuals in the organization. Contrarily, these may be supplemented by extensive files that physically permit storage of large amounts of data. These files may exist at different groups and/or at a central point in the organization. Operational measures are directed at both points. At the group level, there may be limited facilities for storing information beyond the memories of individuals, contrarily, there may be facilities for extensive storage so that potentially useful data (current transactions/miscellaneous input/historical data) can be systematically stored.

Files at the Group Level

1	2	3	4	5	6	7	8	9
Limited-- primarily limited to memories							Extensive-- room to store all potentially useful data	

- b) Ordering/classifying programs. The ability to retrieve and use the data would be affected by the program for ordering and classifying the data. This may range from an unordered file

of data to one that is systematically sorted and classified. There may be different programs at the local level that exist for central files. This is operationalized as follows. The data in the local files may be largely unordered and unclassified, i.e., placed unsorted in the files as it comes in. Contrarily, it may be systematically sorted into subject headings, and the current file periodically separated from historical data, and marginal data thrown away.

Ordering/Classifying of Local Files

1	2	3	4	5	6	7	8	9
Unordered-- data filed without sorting							Ordered-- systematic sorting of data into classified headings	

- c) Coding. Coding of data may be limited or extensive. In the limited case, data are indexed under one subject heading only; contrarily, data may be indexed under multiple headings. A distinction is made between programs at the local level and for central files. This is operationalized as follows: The data in the files at the group level may be uncoded or available under only a single subject head; contrarily, it may be cross classified under several headings.

Cross Classification of Local Data

1	2	3	4	5	6	7	8	9
Single-- indexed under one heading							Multiple-- indexed under several headings	

- d) Retrieval. Information in local files may be available to only a few authorized individuals in the group (restricted and prespecified). On the other hand, anyone in the group may have access to the files who has use for or interest in the information.

Intragroup Access to Local Files

1	2	3	4	5	6	7	8	9
Restricted-- access limited to few individuals							Extensive-- access available to all group members	

Intergroup.--To operationalize the intergroup information system average the following factors:

Intergroup Communication Linkage Scale

1	2	3	4	5	6	7	8	9
Direct contact with each other's office				Partial			Indirect-- contact among centers through one or more intermediaries	

Intergroup Channel Density Scale

1	2	3	4	5	6	7	8	9
Single-- only formal channels are authorized							Multiple-- use any means useful	

Intergroup Transmission Time Scale

1	2	3	4	5	6	7	8	9
Real time							Delayed time	

Intergroup Retrieval Scale

1	2	3	4	5	6	7	8	9
Restricted-- access limited to few indiv- iduals of other groups							Extensive-- access available to all other group members	

Vertical.--To operationalize the vertical information system
average the following factors:

Vertical Communication Linkage Scale

1	2	3	4	5	6	7	8	9
Single-- only formal channels are authorized							Multiple-- use any means that is useful	

Vertical Transmission Time Scale

1	2	3	4	5	6	7	8	9
Real time							Delayed time	

Files at Central Level

1	2	3	4	5	6	7	8	9
Limited-- primarily limited to memories							Extensive-- room to store all potentially useful data	

Ordering/Classifying of Central Files

1	2	3	4	5	6	7	8	9
Unordered-- data filed without sorting							Ordered-- systematic sorting of data into classified headings	

Coding of Central Data

1	2	3	4	5	6	7	8	9
Single-- indexed under one heading							Multiple-- indexed under several headings	

Vertical Retrieval Scale

1	2	3	4	5	6	7	8	9
Restricted-- access limited to few indiv- iduals of other groups							Extensive-- access available to all other group members	

The definitions and descriptive material for the intergroup and vertical variables are the same as that for the intragroup. However, in reading definitions and descriptive materials substitute the word center(s) for person(s).

Leadership Dimensions

The dimensions of leadership are defined by the manner in which a supervisor develops the following:

1. His relationship to subordinates.
2. His relationship to his superiors or other higher level managers and specialists.
3. His relationship to other groups, particularly those where the work flow is integrated.

One can characterize the way a supervisor carries out the representation function, supports interaction, uses standards, specifies goals, and encourages participation. Likewise, the closeness with which he supervises and adheres to rules, and the use he makes of rewards and

penalties as motivating stimuli. He also may be described in terms of technical qualifications, action orientations, problem skills, and other personal abilities. Typically, it is on the basis of these latter dimensions that an individual is promoted to a supervisory position; thus it could be expected that these dimensions have some influence over the behavior patterns that develop. For these reasons, a particular leader can be represented by a profile.

<u>Leadership Functions</u>									
	<u>Democratic</u>			<u>General</u>			<u>Autocratic</u>		
	1	2	3	4	5	6	7	8	9
Representation	<u>Upward</u>						<u>Downward</u>		
Interaction	<u>Lateral</u>						<u>Vertical</u>		
Standards	<u>Low</u>						<u>High</u>		
Goal Emphasis	<u>Group</u>						<u>Individual</u>		
Participation	<u>Extensive</u>						<u>Restrictive</u>		
Direction	<u>Laissez Faire</u>						<u>Close</u>		
Rule Orientation	<u>Judgmental</u>						<u>Strict</u>		
Motivation	<u>Rewards</u>						<u>Penalties</u>		
	1	2	3	4	5	6	7	8	9

<u>Miscellaneous Leadership Dimensions</u>									
	1	2	3	4	5	6	7	8	9
Technical Qualifications	<u>Limited</u>						<u>Extensive</u>		
Action Orientation	<u>Passive</u>						<u>Active</u>		
Problem Skills	<u>Limited</u>						<u>Extensive</u>		
Personal Abilities	<u>Negative</u>						<u>Positive</u>		
	1	2	3	4	5	6	7	8	9

Representation: Upward to Downward

Representation is defined as the act of being a spokesman and a buffer (defender) for the group vis-à-vis superiors and other groups, or the reverse, acting as a spokesman and buffer for higher management and other groups vis-à-vis subordinates.

On the one hand, the leader represents his subordinates' interests to other groups and to higher management. For example, acting in the capacity of spokesman, he attempts to obtain resources required by the group, and to achieve redress on their grievances from those having the authority to make decisions. In acting as a buffer, he screens out pressures exerted by upper management or other groups on his unit. Further, a leader should be willing to challenge decisions made by other groups or higher management where his group's welfare is adversely affected. As a basic orientation, the supervisor promotes the interest of his group vis-à-vis other groups or higher management.

On the other hand, he represents higher management and other groups; the supervisor transmits orders as given and supports the position of his superiors; he interprets and facilitates the transmission of those demands made by superiors or other groups to his subordinates. Further, the supervisor screens out pressures and demands that his group makes on higher management or other groups. In the extreme, subordinates would be forbidden to communicate or otherwise demand or request consideration from others in the organization. In the less extreme case, the supervisor would not represent subordinates, but would not forbid them to represent their own interests, i.e., he would assume a passive role.

Representation Continuum

1	2	3	4	5	6	7	8	9
Upward-- represents his sub- ordinates							Downward-- represents superiors and other groups	

Interaction: Lateral to Vertical

Interaction may be supported or discouraged among superior-subordinate levels laterally (among individuals at the same level within and among formal groups), or in some combination of vertical and lateral interaction. The supervisor may act in a number of ways to support these different patterns of interaction. The supervisor may encourage peer interaction, but discourage superior-subordinate exchanges. Conversely, the supervisor may encourage interaction with his subordinates, but discourage lateral interaction among members of the group and other groups.

The supervisor may strive to keep superior-subordinate interaction on a neutral basis, while encouraging close peer relations. The supervisor may try to maintain the social distance implicit among levels; little personal interaction would be initiated by the supervisor, and would be generally discouraged if initiated by subordinates. The supervisor's interest in subordinates would be strictly functional, confined largely to helping them solve problems or difficulties on the job.

To develop high group interaction, he would encourage social interaction, talking, short parties, giving of gifts and special funds sponsored by the group, and similar activities--both on and off the job. He would support cooperative arrangements such as job exchanges, or permitting the group to assume duties of individuals who are temporarily on unofficial leave, or other reciprocal actions.

In his own interaction with superiors, the supervisor would discourage the development of a close personal relationship. At the same time, the supervisor would both initiate and respond to other groups to develop social and exchange relations. Where possible, he would join informal activities such as betting pools, car pools, special funds, or other social activities.

On the other hand, the supervisor may strive to minimize social distance implicit in hierarchical relations by such acts as expressing interest in his subordinates, their families, their activities, etc. The supervisor would encourage subordinates to bring their personal or organization problems to his attention for his counsel. He would mediate among individuals when disputes arise. The supervisor would generally act to encourage subordinates to develop close personal relations with himself. . . on and off the job.

At the same time, he would discourage peer interaction. For example, he would strive to sharply limit or prohibit social interaction and development of reciprocal relations. He would discourage socializing or talking, short parties, or other social activities on the job.

In respect to his own relations with superiors, the supervisor would strive to develop a close relationship with them. At the same time, he would seek to limit his interaction with other groups to that which would be required in his official capacity. He would resist and withdraw from peer attempts to involve him in a social capacity or other personal relationships.

Interaction Continuum

1	2	3	4	5	6	7	8	9
Lateral interaction				Combination		Vertical interaction		

Participation: Extensive to Restrictive

In arriving at a decision, the supervisor may seek broad participation from those likely to be affected by the decision, or make the decision on his own without any participation.

The supervisor may seek to involve subordinates or other groups that would be affected by decisions in both the deliberations and final decisions. For example, committees might be formed or meetings held with all those directly affected. At a minimum, representatives of groups who would be affected by a decision would participate. The resulting decision would be a majority consensus. Where decisions were being made by higher level supervisors of other groups that would affect his group, the supervisor would initiate suggestions and otherwise attempt to participate and exert influence on the decision process.

On the other hand, decisions may be made by the supervisor without consultation with those affected by the decision. Instead, the decision would be made by supervisors and transmitted to those involved. Where suggestions or other initiatives were offered by subordinates or other groups, these would not be considered. When superiors or other groups were making decisions affecting his unit, the supervisor would not initiate attempts to become involved.

Participation Continuum

1	2	3	4	5	6	7	8	9
Extensive								Restrictive

Direction: Laissez Faire to Close

The approach to direction may vary from a laissez faire to close detailed direction.

The orientation of the supervisor toward subordinates or other groups may be to place them on their own. The subordinates would be dependent upon their own counsel and ability to handle their problems. When subordinates requested direction and guidance, these questions would be referred back to the individual or group to make their own decision. The supervisor would assume a passive posture in respect to the subordinates or other groups that his unit was serving.

On the other hand, the supervisor's orientation towards subordinates or other groups may be to establish detailed direction, both specifying the ends and the means of achieving those ends. The orientation towards the superior would be to seek detailed direction and be concerned that detailed reporting procedures were established, thus showing the extent to which the various steps were followed.

Direction Continuum

1	2	3	4	5	6	7	8	9
Laissez faire								Close

Rule Orientation: Judgmental to Strict

Supervisors may vary in their attitudes toward observing the rules, policies, and procedural statements that are established. One supervisor may emphasize the use of judgment regarding the necessary application of rules, and permit or even encourage deviation from the rules and other prescription when they restrict getting the job done. On the other hand, another supervisor may require strict adherence to rules, and policies, seldom permitting any deviation.

On the one hand, the supervisor's posture towards subordinates and other groups may be to emphasize the ends and not the means; he permits and encourages broad deviation from formal prescriptions when they

impede getting the job done. The supervisor disregards the formal restrictions that have been imposed on his office and those below him. This may be done by (a) explicitly authorizing (either verbally or in writing) his subordinates to ignore policies and rules that have been set forth by higher management; (b) allowing subordinates to initiate and continue deviations from the formal restrictions, even though they have not been given explicit permission to do so.

On the other hand, the supervisor may emphasize rule and policy adherence. Subordinates are prohibited to deviate from the rules and prescriptions, and systematic checks are made to see that they do not. Deviation from rules occurs only when a formal authorization for such deviation -- in writing -- is provided by his superior, or those who initially formulated the rules and regulations.

Rule Orientation Continuum

1	2	3	4	5	6	7	8	9
Judgmental								Strict

Motivation: Rewards to Penalties

There are different ways in which performance may be motivated by use of rewards and sanctions. On the one hand, there may be a primary emphasis on the use of rewards and counseling to motivate. On the other hand, there may be heavy emphasis upon applying sanctions when performance isn't up to expectations.

The supervisor may primarily rely upon rewarding good performance, training, and counseling to orient and motivate subordinates and others. Information on such performance levels as cost, quality, quantity, trends, or complaints would be used to direct attention to problem areas. His approach would be to discuss the manner in which the problem could be solved, and to set goals working in that direction.

On the other hand, a supervisor may use sanctions heavily as a means of motivating performance. Where poor performance develops, sharp sanctions would tend to be involved (i.e., firing, transferring, demoting, revoking privileges, etc.). Data on performance trends would be used as the basis for these sanctions. As performance failed to measure up to standard, the tendency to apply these sanctions would be increased. The supervisor would make particular note of the negative dimensions when discussing his evaluations of the work performed by subordinates or others. His general posture would be that a satisfactory level of performance was expected in all areas and his discussion would concentrate only on those areas where performance was below standard. The supervisor would also tend to discipline publicly, making it clear to all the nature of his dissatisfactions and the sanctions that were being applied.

Motivation Continuum

1	2	3	4	5	6	7	8	9
Emphasize Rewards						Emphasize Penalties		

Miscellaneous Leadership Dimensions

Technical Qualifications: Limited to Extensive

A supervisor may possess various levels of technical qualifications--professional training, work experience, and technical knowledge that are relevant to the assigned responsibilities. These can be broadly described.

Action Orientation: Passive to Active

The action orientation refers to a set of factors that describe the approach to the job. It includes the tendency to delay making

decisions, decisiveness in handling emergencies, work commitment, enthusiasm, initiation of activities, drive, willingness to assume responsibility, and planning orientation.

Problem Skills: Limited to Extensive

The problem skills refer to the intellectual processes of the supervisor. These include reasoning skills, capacity to see overall problems and main issues, conceptual flexibility, innovativeness, and capacity to listen and understand.

Personal Abilities and Orientation: Negative to Positive

These refer to a set of personal skills. These include communicating skills, how criticism is handled, emotionality and predictability, tendency to dominate, and poise.

Each of these aspects of leadership is operationalized by the leadership questionnaire.

APPENDIX A

MEMORANDUM AND QUESTIONNAIRES

M E M O R A N D U M

September, 1971

TO: Selected Company Employees

FROM: Jon English

SUBJECT: Research Study of Organizational Behavior

I am soliciting your cooperation in an academic research study required for the completion of my Ph.D., to be conferred by the University of Florida, Gainesville.

The majority of the data necessary for my exploratory study of organizational behavior will be collected by using the attached questionnaires. A follow-up personal interview in relatively few selected instances will also be used in order for me to gain a more thorough understanding of a situation that may need further study. The personal interview, when used, will be brief, 15-20 minutes, and it will be taped in order to eliminate omissions and errors, and more importantly, to save your time.

The name of your company and the names of all individuals will be concealed. I assure you that your responses to the questionnaires and during the interviews are absolutely confidential and that they are my property and under no circumstances will I name individual respondents but rather primarily report only aggregate results.

GENERAL INSTRUCTIONS

How to Complete the Questionnaires

There is a total of three questionnaires in the areas of Structure, Leadership, and Organizational Behavior, that you will have to complete. Each area contains a number of statements. Please circle the number on the continuum line that expresses what you know or how you feel.

For example:

Does your superior assign people in your work group to particular tasks?

1	2	3	4	5	6	7	8	9
Always		Often		Occasionally		Seldom		Never

If your answer is "Often," you would circle number 3 like this--

1	2	③	4	5	6	7	8	9
Always		Often		Occasionally		Seldom		Never

If you felt that your superior "Occasionally" but not really "Seldom" assigned people in your work group to particular tasks, then you would circle number 6 like this--

1	2	3	4	5	⑥	7	8	9
Always		Often		Occasionally		Seldom		Never

Some questions will have only the two ends of the continuum defined like this--

1	2	3	4	5	6	7	8	9
Always								Never

Select the number closest to the way you feel about the statement and circle it.

1	2	3	④	5	6	7	8	9
Always								Never

The Structural Questionnaire may contain some statements that you are unable to answer because you lack sufficient information. If that is the case omit that particular question, or you may write-in some clarifying sentence that will help us score that item. The Leadership and Behavioral Questionnaires call for your opinion only. You should answer all these questions.

Read Each Statement and all the Descriptive Words

Read each statement and all the descriptive words under the continuum line before you circle your answer. The descriptive words are to help you express your opinion.

This Is Not a Test

There are no "right" answers and no "wrong" answers. It is your own, honest opinion that we want.

When You Have Finished

When you have finished filling out all three questionnaires, please check to see that you have answered all the questions. Do not sign your name on the questionnaires or the envelope. Put your completed questionnaires in the envelope and seal it.

ORGANIZATION STRUCTURE QUESTIONNAIRE

Work Group _____

1. Counting yourself, what is the total number of people in your work group? _____
2. Of this total, how many are you directly responsible for? _____
3. Within your work group, what best describes the degree of task specialization? (Please circle appropriate number.)

9 Extensive specialization. Workers within my work group are dependent upon the proper performance of work by others within the group for proper performance of their work. For example, the work is divided into smaller elements in a step-like process.

8

7 Considerable specialization.

6

5 Moderate amount of specialization.

4

3 Some specialization.

2

1 Little specialization. What each member of the work group does has little effect on other members of the group.

4. Within your work group, what best describes the number of individuals dependent upon your services/output?

1	2	3	4	5	6	7	8	9
None-- don't pro- vide inputs for other group members		Some-- two or more		Moderate-- four or more		Considerable-- six or more		Many-- eight or more are dependent upon the out- put of a position

5. Within your work group there may exist ways in which the impact of breakdowns in work flow can be lessened. Inventories may exist, a backlog of other work may be performed, etc. What best describes your work group?

1	2	3	4	5	6	7	8	9
Extensive-- many ways of making daily or weekly ad- justments to breakdown in workflow		Some		Moderate		Considerable		Few-- little that can be done when break- down in work flow occurs

6. Within your work group, there may be varying degrees that group members can do each others' jobs. Most members may be trained to do any job in the group or most individuals may be able to only handle their own job. What best describes your group?

1	2	3	4	5	6	7	8	9
Extensive-- most have ability to do each others' jobs		Some		Moderate-- at least half the jobs could be performed by two or more persons		Considerable		Little-- few would be able to do others' jobs

7. Within your work group, what best describes the talking distance involved among your group members?

1	2	3	4	5	6	7	8	9
Little-- most mem- bers are within talk- ing distance		Some		Moderate-- half are within talk- ing distance		Considerable		Extensive-- practically nobody is within talk- ing distance

8. Within your work group, what best describes the spacing among the group members?

1	2	3	4	5	6	7	8	9
Direct-- most members are located face-to-face				Partial-- side-by-side relationship among most members				Indirect-- back-to-back relationship among most members

9. Within your work group, what best describes the extent of physical barriers (walls, partitions, etc.) among group members?

1	2	3	4	5	6	7	8	9
None-- no physical barriers		Some		Partial-- some barriers between about half of the group but none between the rest		Considerable		Extensive-- physical separation among individuals

10. Within your work group, what best describes the extent that group members are separated on different floors?

1	2	3	4	5	6	7	8	9
None-- all located on same floor		Some		Partial		Considerable		Extensive-- scattered on different floors

11. Within your work group, what best describes the extent which time schedules (different shifts, etc.) separate your group members?

1	2	3	4	5	6	7	8	9
No separa- tion-- beginning- quitting hours, lunch hours, coffee breaks are scheduled at same time		Some		Partial		Considerable		Extensive-- wide differences in scheduling of working hours, coffee breaks & lunch hours for group members

12. Within your work group, what best describes the noise level separating your group members?

1	2	3	4	5	6	7	8	9
Low noise		Some		Moderate		Considerable		High noise

13. Within your work group there may exist a number of factors that affect work demands. For example, shortages of material, machine breakdowns, variation in the rate of production, etc. Circle the number that best describes the situation that exists in your work group:

During a day

1	2	3	4	5	6	7	8	9
High-- stable de- mands are usual dur- ing the day	Considerable			Medium-- about half the time demands are stable		Some		Low-- unstable and fluctuating demands dur- ing the day

During each week

1	2	3	4	5	6	7	8	9
High-- stable de- mands are usual dur- ing the week	Considerable			Medium-- about half the time demands are stable		Some		Low-- unstable and fluctuating demands dur- ing the week

During each month

1	2	3	4	5	6	7	8	9
High-- stable de- mands are usual from week-to-week	Considerable			Medium-- about half the time demands are stable		Some		Low-- unstable and fluctuating demands from week-to-week

14. In some jobs things are fairly predictable--if you do something, you know what will happen. In others you often are not sure whether something will work or not. What percent of the time would you say that you are sure whether something you do will work?

1	2	3	4	5	6	7	8	9
90%	80%	70%	60%	50%	40%	30%	20%	10%
Almost always	Usually			Often		Sometimes		Seldom

15. Sometimes even though you don't know how to handle a problem, you can go to someone else in your group or elsewhere for reliable help. In other cases, nobody else is likely to be able to provide any reliable help. What percent of the time can you go to others for reliable help when you are at a loss on how to solve a problem?

1	2	3	4	5	6	7	8	9
90%	80%	70%	60%	50%	40%	30%	20%	10%
Almost always	Usually			Often		Sometimes		Seldom

16. How many work groups are dependent upon your group's services/output?

1	2	3	4	5	6	7	8	9
None-- don't pro- vide inputs for other groups		Some-- two or more		Moderate-- four or more		Considerable-- six or more		Many-- eight or more are dependent upon the output of my group

The next eight questions (17-24) pertain to your work group and its relations with the following work group:

17. What best describes the relation between your group and the above group regarding the degree of interdependency?

1	2	3	4	5	6	7	8	9
Little-- what we do has little effect on the above group		Some		Moderate		Considerable		Extensive-- the above group is de- pendent upon our output/ services

18. If there is a disruption in work flow between your group and the above group what best describes your possible actions regarding the lessening of the impact?

1	2	3	4	5	6	7	8	9
Extensive-- many ways of making daily or weekly adjustments to breakdown in workflow		Considerable		Moderate		Some		Few-- little that can be done when break- down in workflow occurs

19. What best describes the talking distance involved between your work group and the above group?

1	2	3	4	5	6	7	8	9
Little-- most of the groups' mem- bers are with- in talking distance		Some		Moderate-- half are within talking distance		Considerable		Extensive-- practically nobody is within talk- ing distance

20. What best describes the spacing between your work group and the above group?

1	2	3	4	5	6	7	8	9
Direct-- most of the groups' mem- bers are located face-to-face				Partial-- side-by-side relationship between most members				Indirect-- back-to-back relationship between the groups' members

21. What best describes the extent of physical barriers (walls, partitions, etc.) between your work group and the above group?

1	2	3	4	5	6	7	8	9
None-- no physical barriers		Some		Partial-- some bar- riers be- tween about half of the groups' mem- bers but none between the rest		Considerable		Extensive-- physical separation between the groups

22. What best describes the extent that your group members are separated on different floors from members of the above group?

1	2	3	4	5	6	7	8	9
None-- located on the same floor		Some		Partial		Considerable		Extensive-- scattered on different floors

23. What best describes the extent which time schedules (different shifts, etc.) separate your work group from the above group?

1	2	3	4	5	6	7	8	9
No separ- ation-- beginning- quitting hours, lunch hours, coffee breaks are scheduled at the same time		Some		Partial		Considerable		Extensive-- wide dif- ferences in scheduling of working hours, coffee breaks & lunch hours between the groups

24. What best describes the noise level separating your work group from the above group?

1	2	3	4	5	6	7	8	9
Low noise level be- tween the groups		Some		Moderate		Considerable		High noise level be- tween the groups

25. Please list the major decisions or the major actions that you take in performing your job.

26. What percentage of decisions is your work group permitted to make without checking with, or obtaining approval of, higher level supervision?

1	2	3	4	5	6	7	8	9
89-100%		67-77%		45-55%		23-33%		0-11%

27. What best describes the degree of discretion that is left to your work group by the policies, procedures, and rules laid down by higher level management and staff groups: (circle most applicable)

9	<u>Restricted discretions</u> -- The policies, procedures and rules limit discretion in decision making to routine, unimportant details; there is no leeway for adaptation to local conditions, special situations, or different ideas in performing the job assignment. There is practically no reliance upon the individual's judgment, general competence and adherence to professional standards to perform the job properly.
8	
7	<u>Some</u>
6	
5	<u>Moderate discretion</u> -- There are policy, and procedure statements and rules that cover most important decisions in the job; there is, however, some discretion to adjust to local conditions, special situations and opportunity to implement new ideas in performing the job assignment; there is some reliance upon the judgment, general competence and adherence to professional (or trade) standards to orient the individual in doing his job properly.
4	
3	<u>General</u>
2	
1	<u>Extensive discretion</u> -- Individuals have broad discretion in making decisions; there is general flexibility to adjust to local conditions, special situations and implement different ideas in performing the job assignment; higher level supervision broadly relies upon judgment, general competence and adherence to professional standards to orient the individual to do the job properly.

28. In your work unit, how many levels in the direct chain of command are there to the plant manager? (Count the supervisor/foreman at the bottom of the chain of command as number one.) _____

29. What would best describe the extent that positions at these different levels in your unit are differentiated? (For example, differences in status symbols--titles, salaries and special privileges--parking spaces, eating facilities, offices, desk sizes, special support, etc.)

9 Extensive difference-- There is a sharply graded set of privileges that go with positions; it would be apparent even to an outsider who is at a higher level.

8

7

6

5

4

3

2

1

Considerable difference

Moderate difference-- Those holding major positions have special privileges and well defined salary differences; but there are only mild differences among most of the levels in the organization.

Some difference

Little difference-- An outsider couldn't tell the differences between people at different levels; (everybody has about the same privileges of parking, offices, sizes and furniture, special services and salary).

30. In your work group's area of specialty/responsibility, to what extent do you have the authority to make decisions for other departments or work groups? (The extent that they must obtain your group's formal approval on decisions.)

1	2	3	4	5	6	7	8	9
Little-- we can only advise		Some-- we can make some decisions but mostly advisory		Moderate-- we can make some important decisions but only advise on most important decisions		Considerable-- we have line authority over most decisions but advisory on some		Extensive-- we have line authority to make most decisions

31. To what extent do other departments or work groups, in their area of specialty/responsibility, have the authority to make decisions that affect your work group? (For example, administrative services may have final authority over hiring, firing or promotions; quality control may determine production standards, etc.)

1	2	3	4	5	6	7	8	9
Little-- they can only advise		Some-- they can make some decisions but mostly advisory		Moderate-- they can make some important decisions but only advise on most important decisions		Considerable-- they have line authority over most decisions but advisory on some		Extensive-- they have line author- ity to make most decisions

32. What best describes the formal, specified performance standards such as time, cost, quantity, quality, etc., that is expected of each individual in your work group?

1	2	3	4	5	6	7	8	9
Standards are nearly all vague and ambiguous		Mostly vague with some that are clear		Moderately clear with some vague- ness		Usually clear but some that are vague		Standards mostly clear and unambiguous

33. What best describes the formal measurement system and the measuring instruments that are used to measure individual performance levels in your work group?

1	2	3	4	5	6	7	8	9
No formal instruments-- only poor measures of individual performance		Some-- some measures of individual performance		Moderate-- a few good measures of individual performance		Considerable-- several good measures of individual performance		Extensive-- numerous good measures of individual performance

34. What best describes, in your work group, the application of sanctions or penalties (taking away of special privileges, salary reductions, demotions or firing) and its relationship to poor individual performance?

1	2	3	4	5	6	7	8	9
Little-- relationship between pen- alties and poor performance		Some		Moderate-- relationship between pen- alties and poor performance		Considerable		Direct-- relationship between pen- alties and poor performance

35. What best describes the relationship of rewards and different performance levels in your work group?

9 Direct relationship-- If one does a good job he nearly always receives recognition, rewards and chance for promotions; if he does a poor job, he nearly always will not. Seniority, special connections are only important when decisions could go either way.

8

7 Considerable relationship

6

5 Partial relationship-- The situation is a mixed picture; if one does an outstanding job, he usually will receive recognition, raises and a chance for a promotion; others, however, may do a relatively poor job and still be rewarded on basis of seniority, friendship or special ties with key people.

4

3 Some relationship

2

1 Little relationship-- There seems to be little relationship between how good a job one does and the amount of raises that are received, promotions given, or special recognition granted.

36. What best describes the vertical (higher or lower levels may be contacted) job related communication situation in your organization?

1	2	3	4	5	6	7	8	9
Unrestricted-- contact with higher or lower levels is authorized	Somewhat unrestricted		Partially		Somewhat restricted		Restricted-- permission must be ob- tained prior to contacting higher or lower levels	

37. Within your work group, what best describes the job related communication system?

9 Restricted-- Individuals within the group are expected to clear contacts with group members with the supervisor, or others before asking for or giving information.

7 Somewhat restricted

5 Partially

3 Somewhat unrestricted

1 Unrestricted-- Individuals within the group are authorized to contact any other group member and request or give him information that would be helpful in his job.

38. In your work group's relations with other groups at the same level, what best describes your job related communications?

9 Restricted-- Individuals are expected to clear contacts with members of other groups with the supervisor, or others before asking for or giving information.

7 Somewhat restricted

5 Partially

3 Somewhat unrestricted

1 Unrestricted-- Individuals are authorized to contact any other individual in other groups and request or give him information that would be helpful in his job.

39. Within your work group there may be few authorized ways of communicating with each other. For instance, it may be necessary to rely upon formal memos or notes; contrarily there may be numerous authorized ways including meetings, informal get-togethers, bulletin boards, memos, etc. What best describes your group's channels of communication?

1	2	3	4	5	6	7	8	9
Single--								Multiple--
only formal								use any
channels are								means that
authorized								is useful

40. What best describes the ways of communicating with members of other groups at your same level in the organization?

1	2	3	4	5	6	7	8	9
Single--								Multiple--
only formal								use any
channels are								means that
authorized								is useful

41. What best describes the ways of communicating with members higher or lower in the organization?

1	2	3	4	5	6	7	8	9
Single--								Multiple--
only formal								use any
channels are								means that
authorized								is useful

42. At your work group level, what best describes the existing storage facilities for potentially useful data (for example, current production rates, raw material usage, historical data, miscellaneous work figures, grievances, etc.)?

1	2	3	4	5	6	7	8	9
Limited--				Moderate			Extensive--	
primarily							room to	
limited to							store all	
memories							potentially	
							useful data	

43. At the plant office level, what best describes the existing storage facilities for potentially useful data?

1	2	3	4	5	6	7	8	9
Limited--				Moderate			Extensive--	
primarily							room to	
limited to							store all	
memories							potentially	
							useful data	

44. At your work group level, what best describes the way data are sorted and classified?

1	2	3	4	5	6	7	8	9
Unordered-- data filed without sorting		Somewhat unordered				Somewhat ordered		Ordered-- systematic sorting of data into classified headings

45. At the plant office level, what best describes the way data are sorted and classified?

1	2	3	4	5	6	7	8	9
Unordered-- data filed without sorting		Somewhat unordered				Somewhat ordered		Ordered-- systematic sorting of data into classified headings

46. At your work group level, what best describes the way data in the files are coded and classified?

1	2	3	4	5	6	7	8	9
Single-- indexed under one heading								Multiple-- indexed under several headings

47. At the plant office level, what best describes the way data in the files are coded and classified?

1	2	3	4	5	6	7	8	9
Single-- indexed under one heading								Multiple-- indexed under several headings

48. Within your work group, what best describes the degree of access to the information in your files by group members?

1	2	3	4	5	6	7	8	9
Restricted-- access limited to few individuals								Extensive-- access available to all group members

49. What best describes the degree of access which individuals of other work groups have to the information in your group's files?

1	2	3	4	5	6	7	8	9
Restricted-- access limited to few individ- uals of other groups								Extensive-- access available to all other group members

50. What best describes the degree of access which individuals in the organization have to the information in the plant office files?

1	2	3	4	5	6	7	8	9
Restricted-- access limited to few individuals in the organization								Extensive-- access available to all other organization members

51. Where there is formal provision for keeping others informed, individuals may be authorized to transmit information to other group members as it occurs (real time); in contrast, there may be formal provision to transmit the data periodically, i.e., batching of data and transmitting it on delayed time basis such as monthly or quarterly. What best describes the situation in your work group?

1	2	3	4	5	6	7	8	9
Immediate-- transmittal as the event occurs		Almost immediate				Somewhat delayed		Delayed-- transmittal as data is accumulated

52. What best describes the way information is transmitted to other work groups?

1	2	3	4	5	6	7	8	9
Immediate-- transmittal as the event occurs		Almost immediate				Somewhat delayed		Delayed-- transmittal as data is accumulated

53. What best describes the way information is transmitted to immediate, or higher level supervision?

1	2	3	4	5	6	7	8	9
Immediate-- transmittal as the event occurs		Almost immediate				Somewhat delayed		Delayed-- transmittal as data is accumulated

8. Does he support interaction among work group members more than with himself?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Rarely

9. Does your superior stand up for the interest of your work group on important job related issues (such as overtime, raises, promotions, job classifications, transfers, and getting fair hearings on grievances)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Seldom

10. What best describes his conceptual skills at solving work problems?

1	2	3	4	5	6	7	8	9
Freezes on a single approach							Develops Alternatives	

11. Does your superior stand up for the interests of your work group in trying to obtain adequate resource support (such as personnel, new equipment, materials and supplies)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Seldom

12. Does he discourage open discussion of issues and problems (such as by listening to only a select few to develop and expand their views)?

1	2	3	4	5	6	7	8	9
Rarely		Sometimes		Often		Usually		Almost always

13. What best describes his personality?

1	2	3	4	5	6	7	8	9
Timid								Forceful

14. What best describes his technical know-how?

1	2	3	4	5	6	7	8	9
Incompetent								Competent

15. Does he continually express his approval or disapproval by complimenting individual achievements and critically pointing out mistakes?

1	2	3	4	5	6	7	8	9
Rarely		Sometimes		Often		Usually		At nearly every opportunity

16. What best describes the way in which he focuses on problems?

1	2	3	4	5	6	7	8	9
Gets involved in details					Centers on main issues			

17. Does your supervisor allow the work group to set its own performance standards (lets them alone unless quantity, quality or cost are badly lagging)?

1	2	3	4	5	6	7	8	9
Almost always	Usually		Often		Sometimes		Rarely	

18. What best describes his enthusiasm toward his job?

1	2	3	4	5	6	7	8	9
Low								High

19. Does he encourage "majority rule" (such as by insisting the minority abide by the majority in cases of disputes, and generally supporting the majority position)?

1	2	3	4	5	6	7	8	9
Almost always	Usually		Often		Sometimes		Rarely	

20. When organizational demands conflict with any professional rights of group members, does your supervisor emphasize the need to make adjustments to the organizational pressures?

1	2	3	4	5	6	7	8	9
Almost always	Usually		Often		Sometimes		Seldom	

21. What best describes the way he handles decisions?

1	2	3	4	5	6	7	8	9
Delays decisions					Decides quickly			

22. What best describes the way your superior initiates job activities?

1	2	3	4	5	6	7	8	9
Waits for others					Starts things			

23. Does he emphasize individual responsibility when several are working on the same job?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

24. What best describes your superior and his work commitment?

1	2	3	4	5	6	7	8	9
Hardly works								Works hard

25. When your work group seeks a loose enforcement of policies, procedures and rules (that management and staff groups want tightly enforced), does your superior support the work group?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Seldom

26. Does he ask for comments and suggestions from your work group on job related matters (setting goals, changing methods, solving job problems, or making important changes in the working arrangements)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Seldom

27. To obtain cooperation of other supervisors, does your supervisor rely upon persuasion, trading arrangements and good personal relations (rather than upon appeals to higher level supervision or other pressure methods)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Seldom

28. What best describes him emotionally?

1	2	3	4	5	6	7	8	9
Easily aroused								Seldom aroused

29. What best describes his professional/technical training?

1	2	3	4	5	6	7	8	9
Limited								Extensive

30. Does your supervisor try to persuade his superior and staff groups to issue broadly stated policies and procedures so as to leave flexibility for the work group (rather than detailed instructions that clarify exactly what the group is supposed to do)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Rarely

31. In directing your work group, which of the following best describes your supervisor?

9
8
7
6
5
4
3
2
1

Tight direction -- he issues detailed instructions on what to do and how to do it. These are given step-by-step so that he gives instructions as the job proceeds.

General direction -- he outlines the job to be done and gives general instructions on how to do it, leaving the details for the individual or group to work out.

Loose direction -- he outlines the job to be done and leaves it up to the individuals or groups to decide how to do it.

32. What best describes the way he typically handles job emergencies?

1 2 3 4 5 6 7 8 9
Indecisive Decisive

33. What best describes your superior's perception of a problem?

1 2 3 4 5 6 7 8 9
Sees only sub-problems Sees overall problem

34. What best describes the way he approaches job responsibilities?

1 2 3 4 5 6 7 8 9
Avoids responsibility Seeks responsibility

35. When you discuss work problems with your superior, what best describes the situation?

1 2 3 4 5 6 7 8 9
He understands with difficulty He understands easily

36. Where there is some freedom, does he assume a flexible position on moving budgeted funds from one category to another when it would help the overall group?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Seldom

37. Does he maintain tight control over office resources (such as on the use of supplies, personnel, or equipment) to insure they are used only for authorized purposes?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Seldom		Sometimes		Often		Usually		Almost always

38. Does he try to meet with other supervisors to work on common problems?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

39. In face-to-face contact with your superior, what best describes his communicating skill?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Vague and wandering								Clear and concise

40. Does he discipline in personal terms (such as declaring that individuals lack ability, are slow, clumsy, or incompetent)?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

41. Does he discipline by focusing on elements of the job (such as pointing up areas of poor performance, and setting goals and plans for correction)?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

42. Does your supervisor make personnel decisions (hiring new staff, promoting personnel, or adopting new personnel policies and programs) without asking for advice and comments of your work group?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

43. In disciplining, does he discuss subordinate's behavior and performance in private (rather than in front of fellow workers and others)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Rarely

44. In ordering, requesting, or giving suggestions, is your supervisor's method best described as:

Nonadaptive--the supervisor generally substitutes his approach over that being taken by individuals or the group as a whole; his concern is with implementing his ideas rather than developing further the ideas and approaches initiated by others.

Directive--his comments and directions partly amplify, and partly modify the approach being followed by individuals or group as a whole. Occasionally, he will substitute his judgment for theirs, and order them to implement his approach.

Adaptive--his suggestions and comments complement the problem solving approach and flow of activities being carried on by individuals, or group as a whole (that is, he doesn't impose different ideas and approaches on the group).

45. When he must decide between supporting higher management or his work group, does he go along with management (such as by allowing his decisions to be overruled without protest)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Seldom

46. Is your supervisor lax in enforcing policies, procedures, and rules on the work group?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

47. In dealing with his superior, other supervisors, or staff groups, is the emphasis of your supervisor on observing the restrictions of policies, procedures and rules?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

48. Is your supervisor's "style" to request assistance, ask for help and give suggestions (such as "Would you do this. . .?", or "Why don't you look at the problem another way. . .")?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

49. Does he emphasize intergroup goals over group goals when dealing with his superior, other parallel supervisors, or staff personnel (such as pushing for what is good for the organization rather than just for his own group)?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

50. What best describes his approach to work problems?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Unimaginative								Imaginative

51. In dealing with his superior and staff groups, does your supervisor try to persuade them to emphasize rewards (such as liberal promotions and raises) to motivate work groups?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost Always		Usually		Often		Sometimes		Rarely

52. When the interests of other work groups and your group are in conflict, does your supervisor respond to the pressures of the other group?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Seldom		Sometimes		Often		Usually		Almost always

53. Does he try to build up the group's image in dealing with management and staff (such as keeping them informed on what the group is doing, soundness of its program and competence of its personnel)?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Seldom

54. Does he ask for advice and comments of others (his superior, relevant staff personnel, or supervisors of other work groups) on issues and problems on which they are likely to be concerned?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

55. How does your superior handle criticism that is directed at him?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rejects and defends								Accepts and evaluates

56. What best describes his actions?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Inconsistent								Consistent

57. Does your supervisor take a "can do it" approach when policies or rules impede getting the job done and find a way (rather than a "cannot do it" approach and quote the policies or rules that prevent action)?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

58. What describes his approach to problems?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Each problem is handled individually								Similar prob- lems are handled to- gether

59. Does your supervisor encourage group members to meet together and with other work groups on the job to work out common problems?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

60. What best describes your superior's approach to his job?

1	2	3	4	5	6	7	8	9
Deals with problems as they occur							Looks ahead to anticipate problems	

61. Does he emphasize the need for group members to regularly evaluate each other's progress (while sharply restricting his own evaluations)?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Rarely

62. In written communication with your superior, what best describes the way he is able to explain himself?

1	2	3	4	5	6	7	8	9
Vague and wandering							Clear and concise	

63. In checking on your work group, which of the following best describes your supervisor?

9 Close checking--he checks regularly to see that his instructions are followed, how each step is proceeding, and on how well the completed job is done.

8

7

6

5 General checking--he regularly checks on the general progress of the group and nearly always checks on how well the completed job is done.

4

3

2

1 Loose checking--he hardly ever checks on how well the job is going, and seldom checks on how well the completed job is done.

64. Does he emphasize the need of his superior and staff groups to establish high standards for his and other units?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

65. What best describes your superior?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Gives up when faced with difficulties								Works until problems are solved

66. Does your supervisor emphasize and enforce formal policies, procedures and rules on the work group?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

END OF LEADERSHIP QUESTIONNAIRE

ORGANIZATIONAL BEHAVIOR QUESTIONNAIRE

Instructions: The following thirty-three questions pertain to your plant and what exists now. As in the previous leadership questionnaire, give your first reaction, work rapidly, do not omit any questions, and mark each question only once.

1. Do supervisors have trust and confidence in subordinates?

1	2	3	4	5	6	7	8	9
Rarely		Sometimes		Often		Usually		Almost always

2. Do the different work groups express a sense of being a part of a total team? For example, is harmony, good will and cooperation typical among the various groups?

1	2	3	4	5	6	7	8	9
Rarely		Sometimes		Often		Usually		Almost always

3. Are employees involved in their job? For example, do they try to do the job thoroughly, and take pride in their work?

1	2	3	4	5	6	7	8	9
Low involvement		Some		Moderate involvement		Considerable		High involvement

4. Do employees develop a sense of achievement in performing their jobs? For example, do they get satisfaction out of doing a good job?

1	2	3	4	5	6	7	8	9
Rarely		Sometimes		Often		Usually		Almost always

5. Do employees develop a feeling of frustration in performing their jobs? For example, are they disturbed about their job performance or complain about not being able to do the job correctly?

1	2	3	4	5	6	7	8	9
Almost always		Usually		Often		Sometimes		Rarely

6. Within the same group, do employees accept decisions made at management levels above their immediate superior?

1	2	3	4	5	6	7	8	9
Rarely		Sometimes		Often		Usually		Very often

7. Do subordinates have trust and confidence in superiors?

1	2	3	4	5	6	7	8	9
Rarely		Sometimes		Often		Usually		Almost always

8. Do employees try to improve themselves to do a better job? For example, do they take self-study courses, enroll in adult education courses, read, or seek to learn on the job?

1	2	3	4	5	6	7	8	9
Little self-improvement		Some		Moderate	Considerable		High self-improvement	

9. Do members of your work group have confidence and trust in each other?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes			Often	Usually		Almost always	

10. Do employees sharply limit volunteering important job related information? For example, is there intentional withholding and distortion of information by subordinates for self-protection?

1	2	3	4	5	6	7	8	9
Almost always	Usually		Often		Sometimes		Rarely	

11. When your work group is affected by decisions made by other work groups, do the members accept these with good spirit? For example, do they seek to make the necessary adjustments rather than complain about or challenge the decisions?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

12. Do subordinates volunteer useful information on personnel problems, group relations, and other types of human relations problems?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

13. Do employees accept decisions of their immediate supervisor? For example, do they implement his decisions following both the intent and letter of the decisions?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Very often	

14. Do individuals identify with their work group? For example, do members display a sense of unity, feel part of the group, and wish to remain in the work group?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

15. Aside from company sponsored events, do employees meet informally off the job? For example, do they get together to talk, play cards, or participate in other friendly activity before and after official work hours or during lunch?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

16. When information is requested by supervisors, do employees provide accurate and complete data?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

17. Are communications between your work group and other groups accurate and complete?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

18. Is there discussion within each work group concerning non-job related subjects? For example, are subjects as politics, sports, sex, etc. spontaneously discussed?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
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19. Do employees accept decisions of staff groups?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

20. Do subordinates bring job problems to the attention of their supervisors?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

21. Does the turnover rate affect the operation of the plant? For example, does it have an unstable effect on operations, schedules and quality of work?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

22. Is there cooperation and sense of being a part of a team between supervisors and subordinates? For example, do subordinates give spontaneous and ready assistance without being asked?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

23. How much initiative do employees show on the job? For example, do they try to improve methods and solve most work problems?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Little initiative		Some		Moderate initiative		Considerable		High initiative

24. Aside from company sponsored events, does your work group or members of your group meet informally with other work groups? For example, do they get together before or after official work hours, or over lunch?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

25. Does absenteeism affect the operation of the plant? For example, does it have an unstable effect on operations, schedules, costs and quality of work?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Almost always		Usually		Often		Sometimes		Rarely

26. In your work group, is there cooperation among co-workers? For example, is assistance regularly given without being asked and in a generally spontaneous manner?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

27. Are employees willing to change the work pace, work breaks and schedules as the work pressure increases? For example, do they generally make adjustments without supervisory pressure to meet goals established for the group?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

28. Is there trust and confidence between your work group or department and other departments?

<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>
Rarely		Sometimes		Often		Usually		Almost always

29. Do employees do a full day's work? For example, do they try to meet or exceed established work standards?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

30. Is important job related information restricted, screened, or blocked between your group and other groups? For example, is there direct withholding of important information?

1	2	3	4	5	6	7	8	9
Almost always	Usually		Often		Sometimes		Rarely	

31. Is there discussion within your work group on job related subjects? For example, do members contribute ideas on possible solutions to common job problems?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

32. Is there discussion between your work group and other groups on non-job related topics such as politics, sports, etc.?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

33. Is there cooperation and teamwork between your work group and other groups? For example, is spontaneous and ready assistance given without being asked?

1	2	3	4	5	6	7	8	9
Rarely	Sometimes		Often		Usually		Almost always	

END OF BEHAVIORAL QUESTIONNAIRE

APPENDIX B

KEY TO THE LEADERSHIP QUESTIONNAIRE WITH HEADINGS ADDED AND NON-RANDOMIZED

<u>Variable</u>	<u>Questionnaire Item Numbers</u>
Representation	9, 11, 20, 25, 45, 52, 53.
Interaction	1, 8, 15, 38, 59, 61.
Standards	3, 17, 64.
Goal Emphases	6, 23, 49.
Participation	12, 19, 26, 42, 54.
Direction	30, 31, 44, 48, 63.
Rule Orientation	36, 37, 46, 47, 57, 66.
Motivation	4, 27, 40, 41, 43, 51.
Technical Qualifications	7, 14, 29.
Action Orientation	18, 21, 22, 24, 32, 34, 60, 65.
Problem Skills	2, 10, 16, 33, 35, 50, 58.
Personal Abilities and Orientation	5, 13, 28, 39, 55, 56, 62.

APPENDIX C

KEY TO THE BEHAVIORAL QUESTIONNAIRE WITH HEADINGS ADDED AND NON-RANDOMIZED

<u>Variable</u>	<u>Questionnaire Item Number</u>
<u>Individual Behavior</u>	
Job Involvement	3
Commitment to Meeting Standards	29
Initiative	23
Self-Improvement	8
Work-Goal Commitment	27
Frustration Levels	5
Sense of Achievement	4
Absenteeism	25
Turnover	21
<u>Intragroup Behavior: Lateral Relations</u>	
Confidence and Trust	9
Job Related Communication	31
Non-Job Related Communication	18
Cooperation Patterns	26
Group Unity	14
Interaction Off the Job	15
<u>Intragroup Behavior: Vertical Relations</u>	
Trust and Confidence--Downward	1
Trust and Confidence--Upward	7
Requested Information	16
Communication Screening	10
Job Information	20
Human Relations Information	12
Cooperation and Teamwork	22
Acceptance of Immediate Supervisor Decisions	13
Acceptance of Higher Level Management Decisions	6
Acceptance of Staff Group Decisions	19
<u>Intergroup Behavior</u>	
Confidence and Trust	28
Communications Accuracy	17
Communications Screening	30
Informal Communications	32
Cooperation and Teamwork	33
Team Spirit	31
Acceptance of Decisions	11
Interaction Patterns	24

APPENDIX D

PRIMARY AND MEDIATING STRUCTURAL, LEADERSHIP,
AND BEHAVIORAL PROFILES OF PLANT A

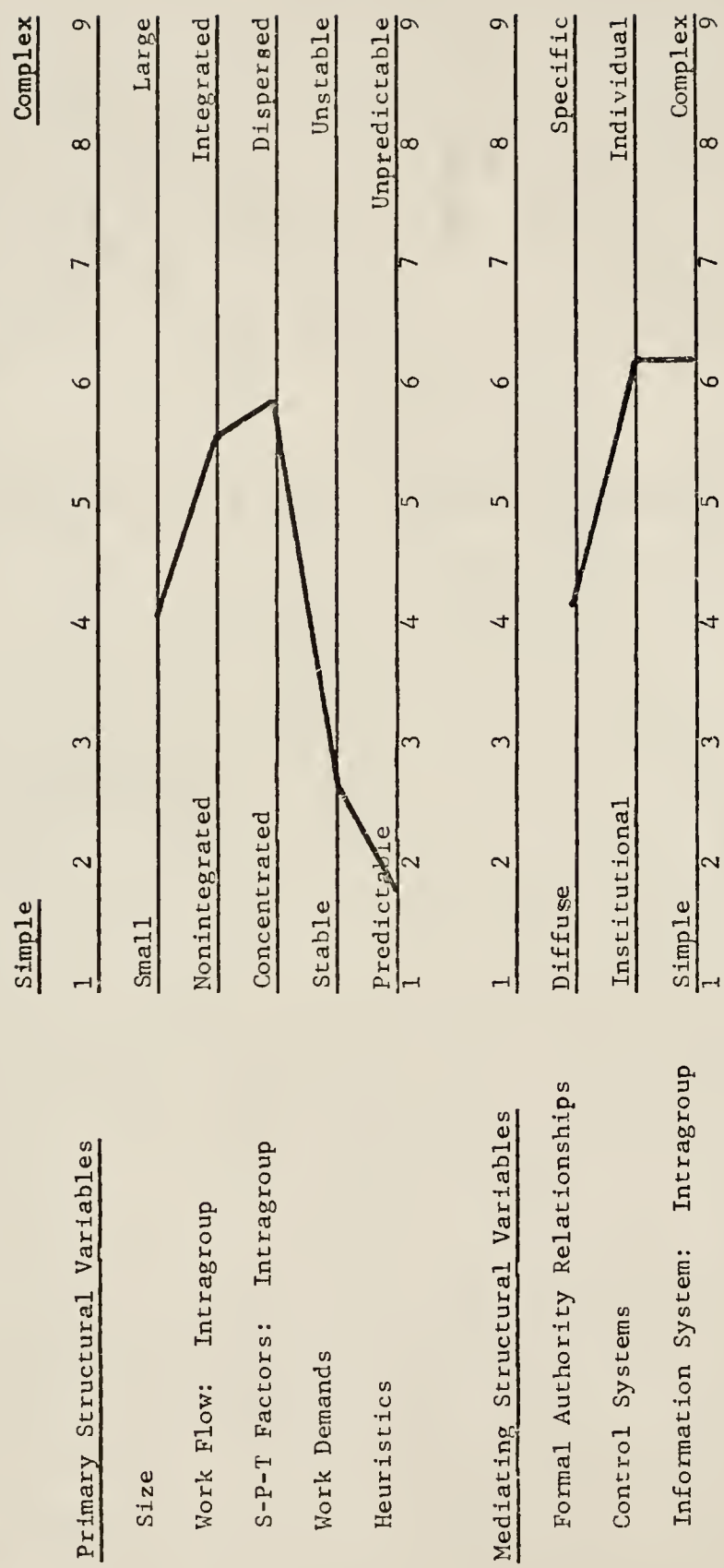


Fig. 7.--Primary and Mediating Structural Variable Profile, Work Group 1, Plant A.

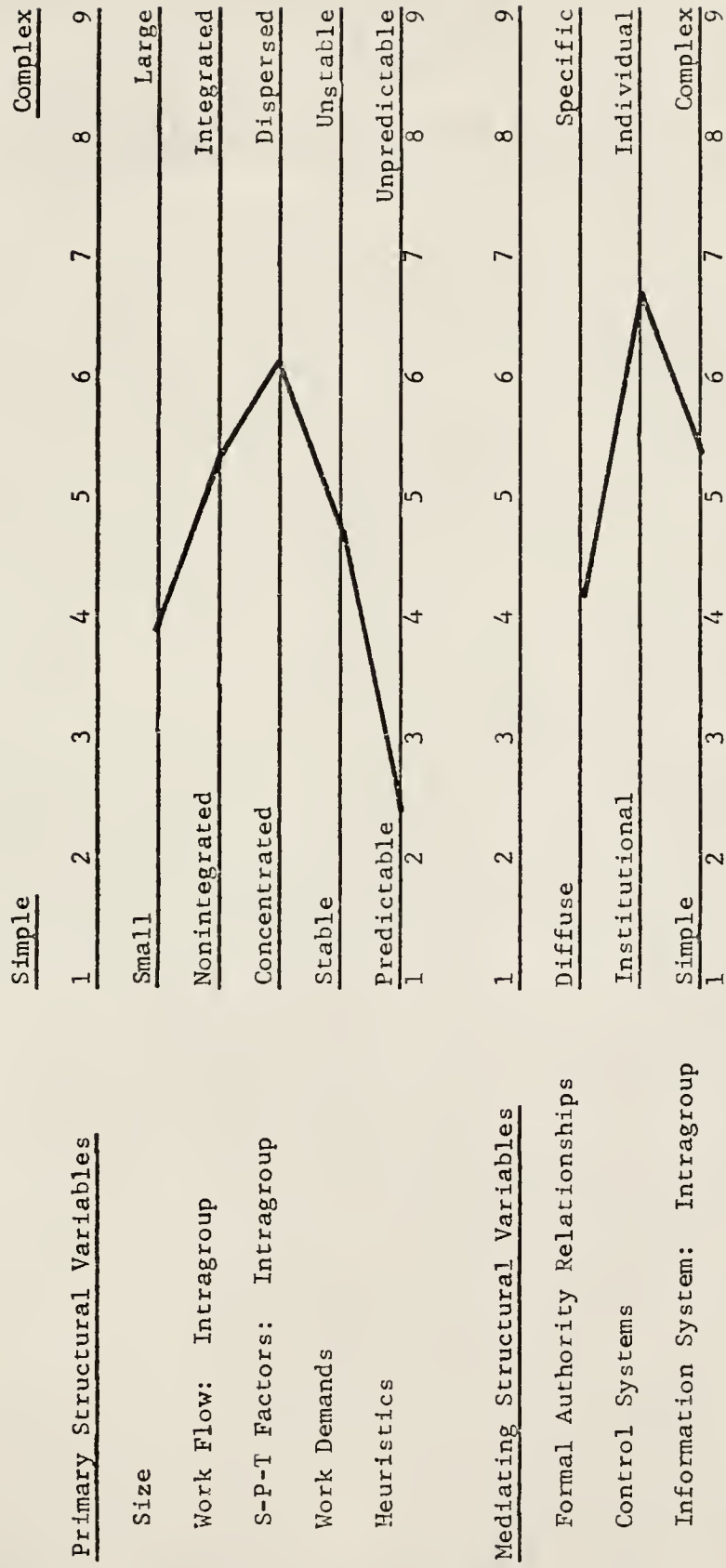


Fig. 8.--Primary and Mediating Structural Variable Profile, Work Group 2, Plant A.

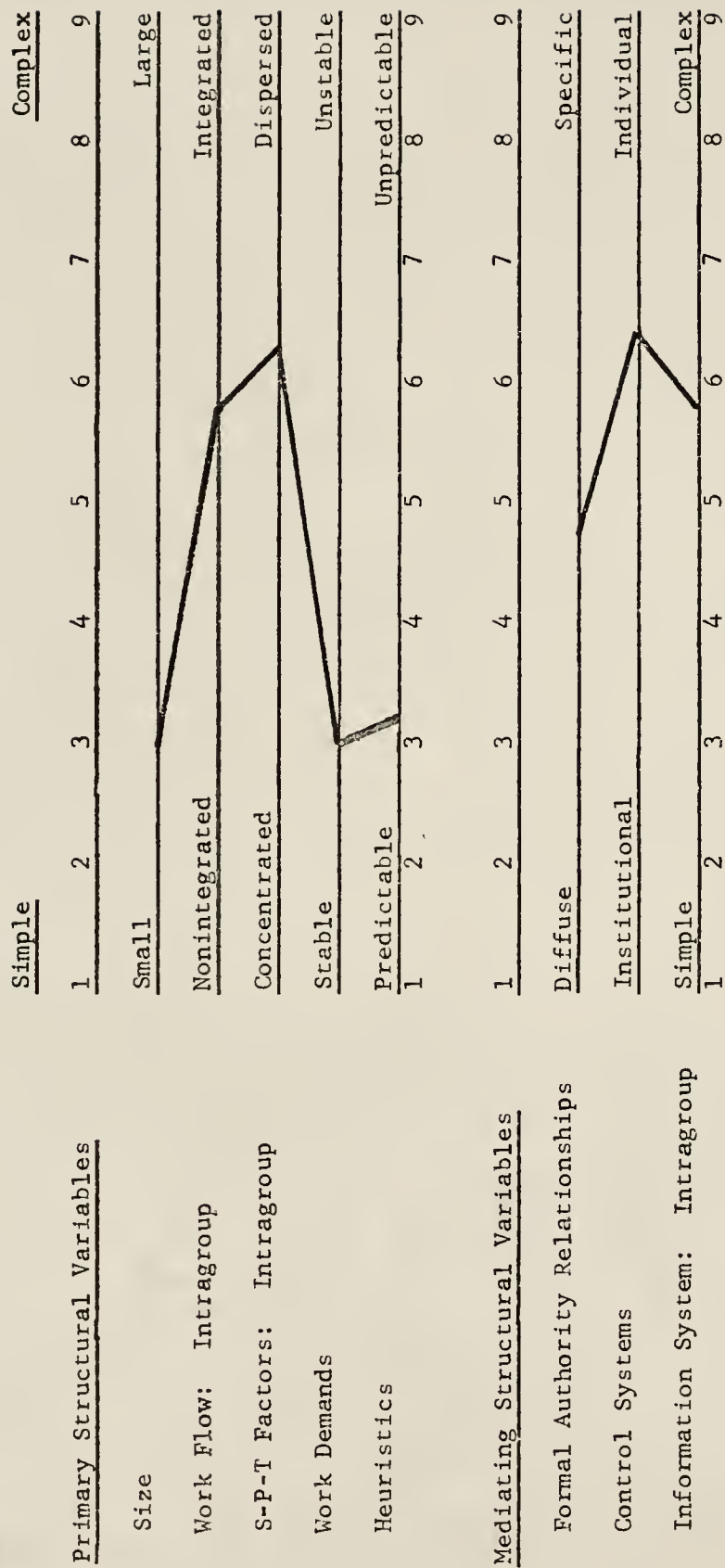


Fig. 9.--Primary and Mediating Structural Variable Profile, Work Group 3, Plant A.

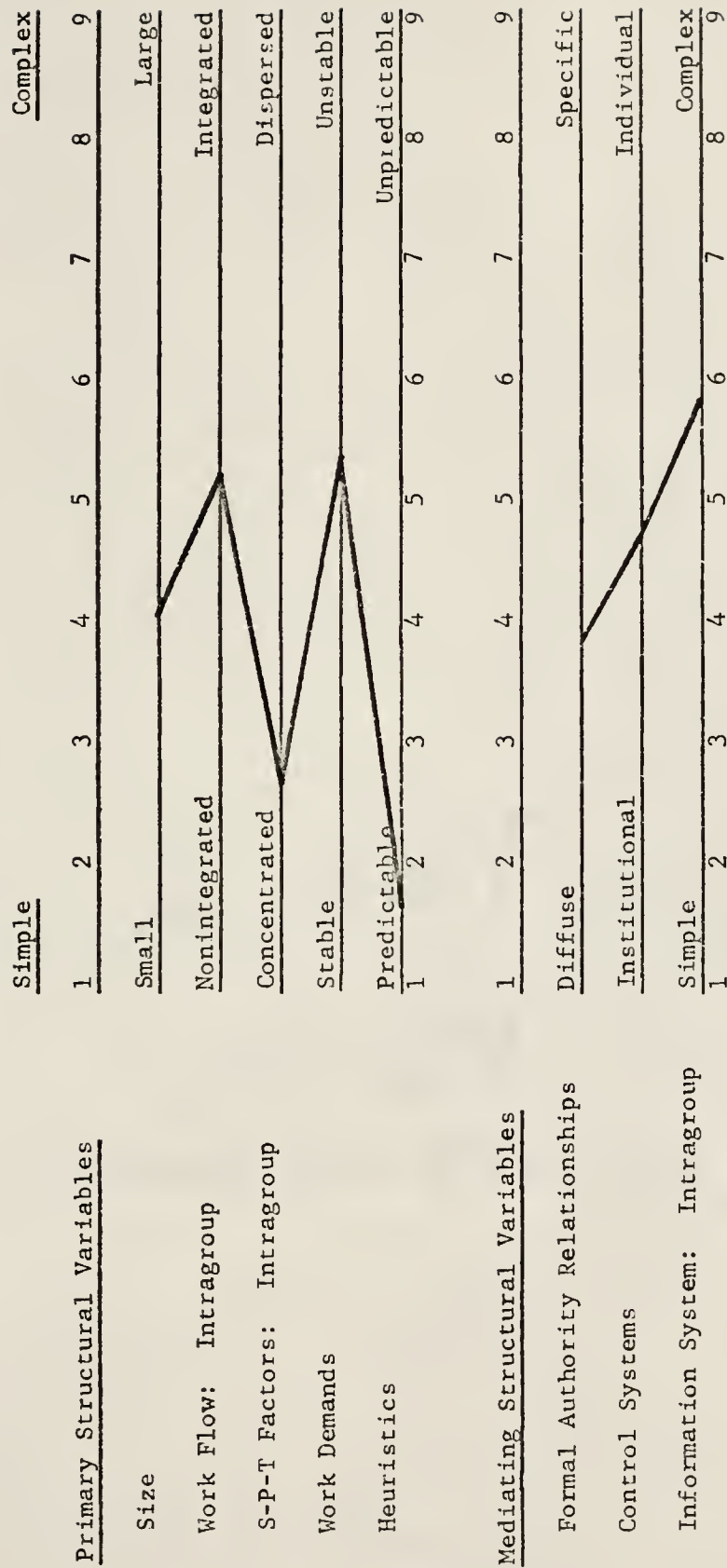


Fig. 10.--Primary and Mediating Structural Variable Profile, Work Group 4, Plant A.

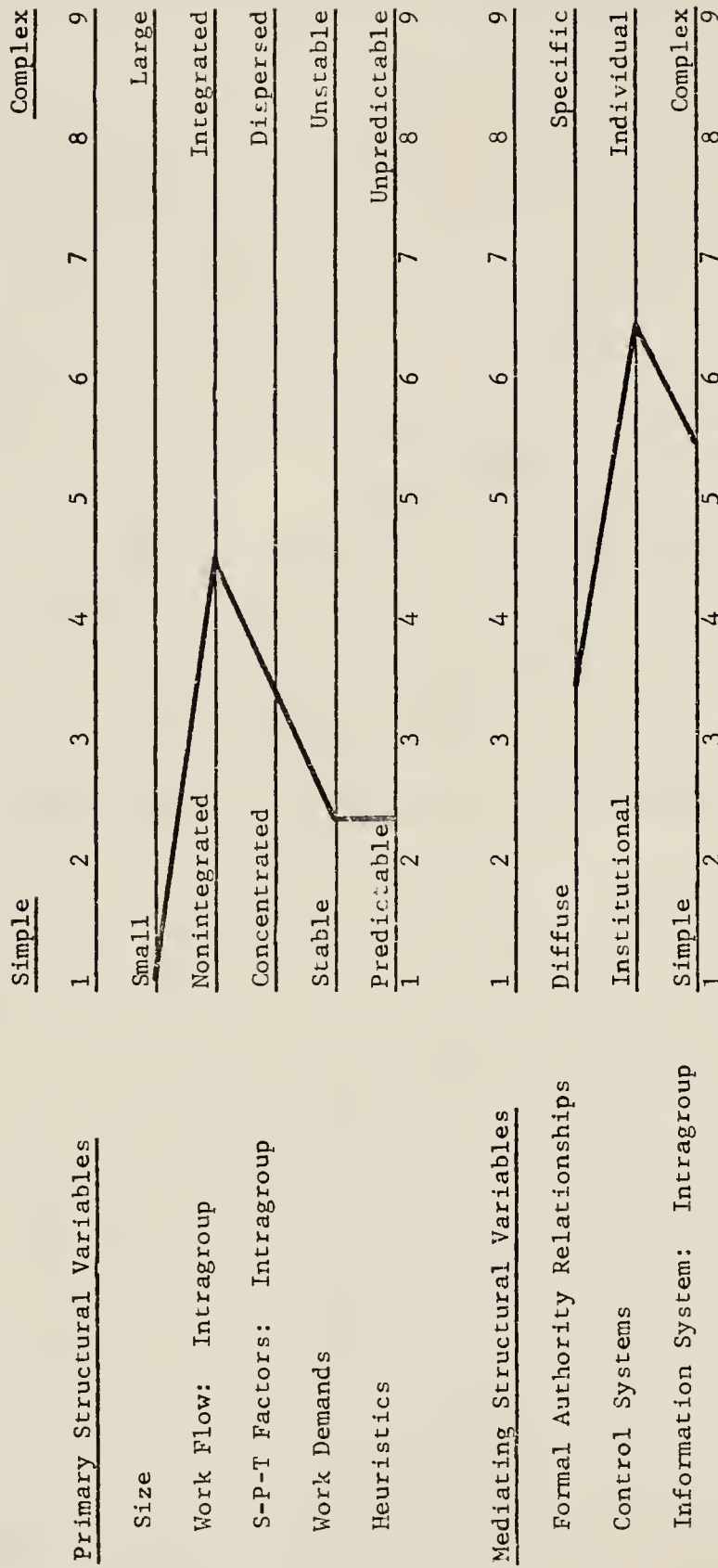


Fig. 11.--Primary and Mediating Structural Variable Profile, Work Group 5, Plant A.

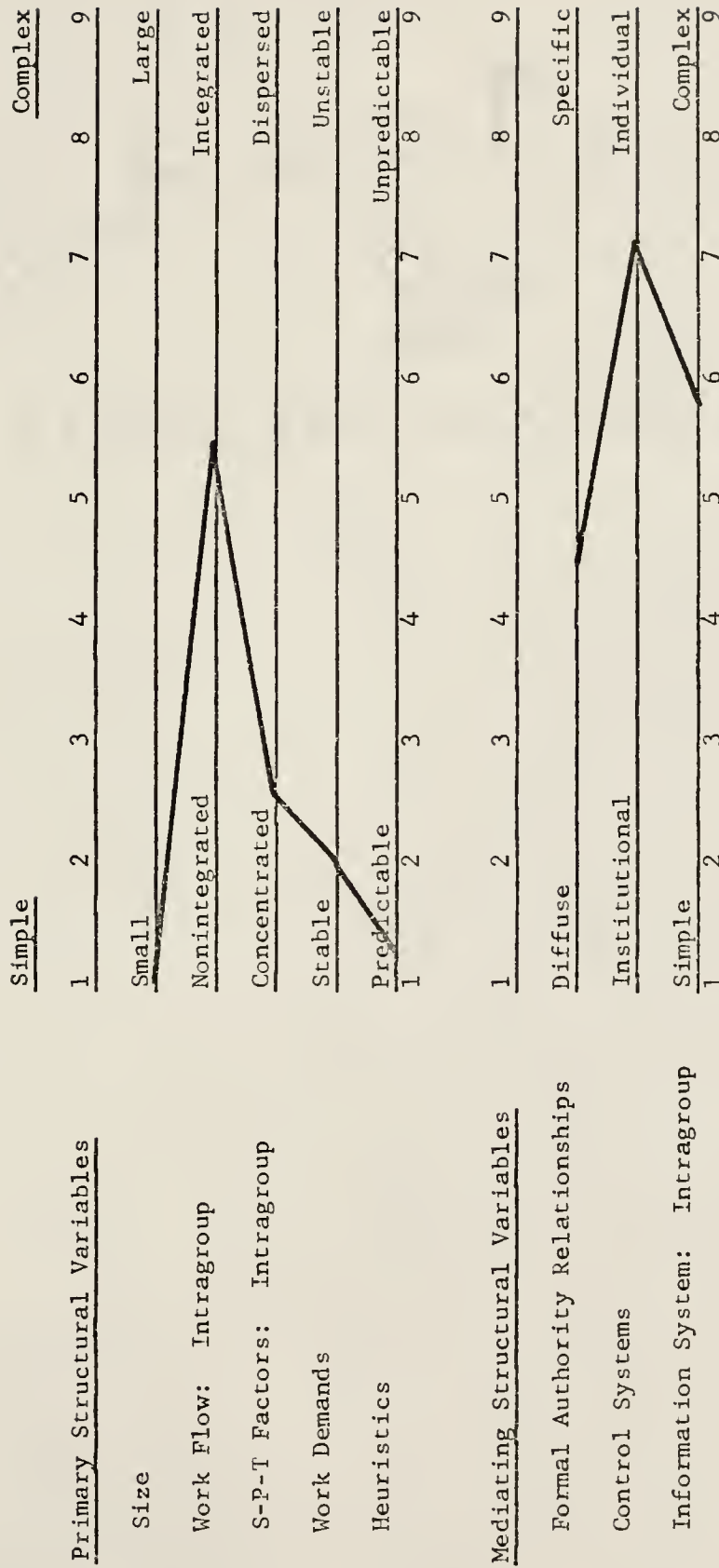


Fig. 12.--Primary and Mediating Structural Variable Profile, Work Group 6, Plant A.

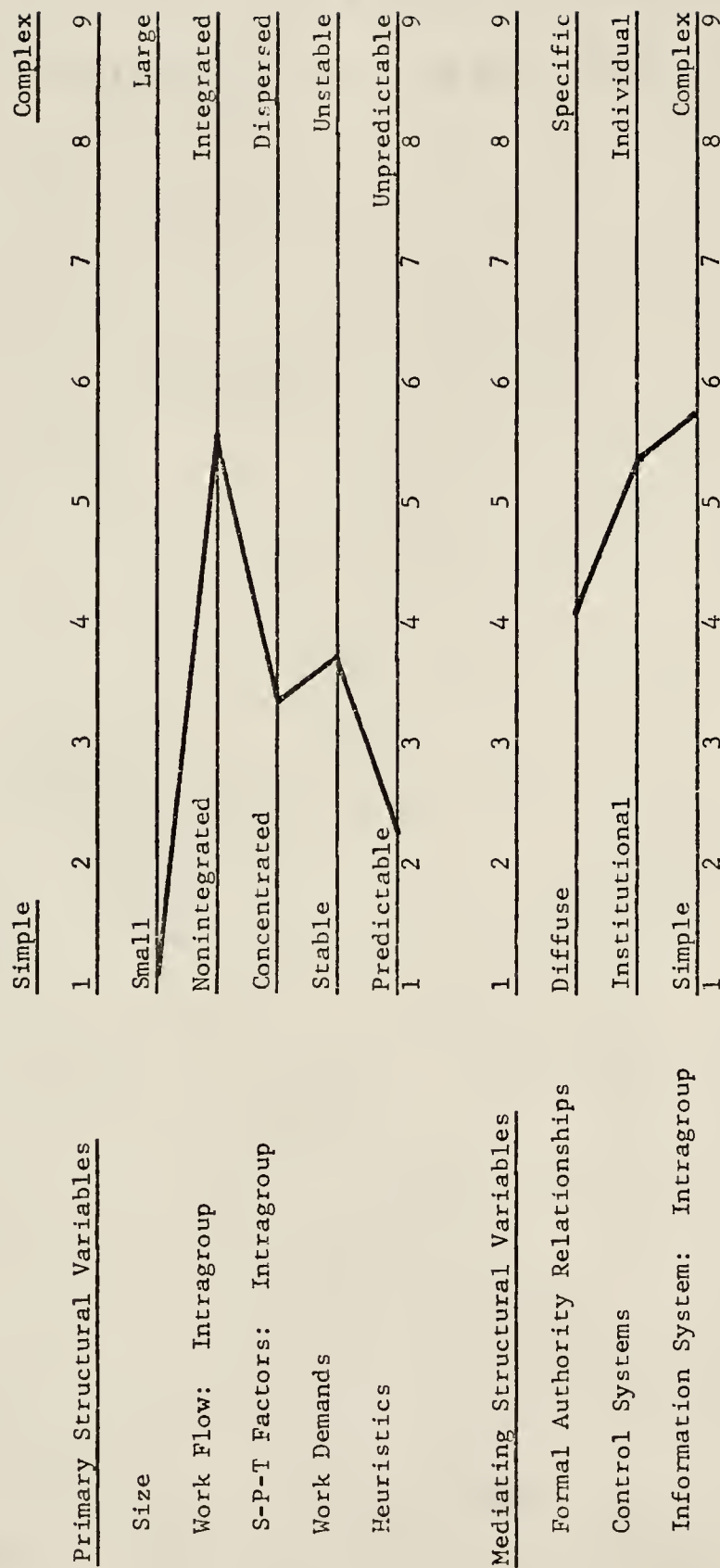


Fig. 13.--Primary and Mediating Structural Variable Profile, Work Group 7, Plant A.

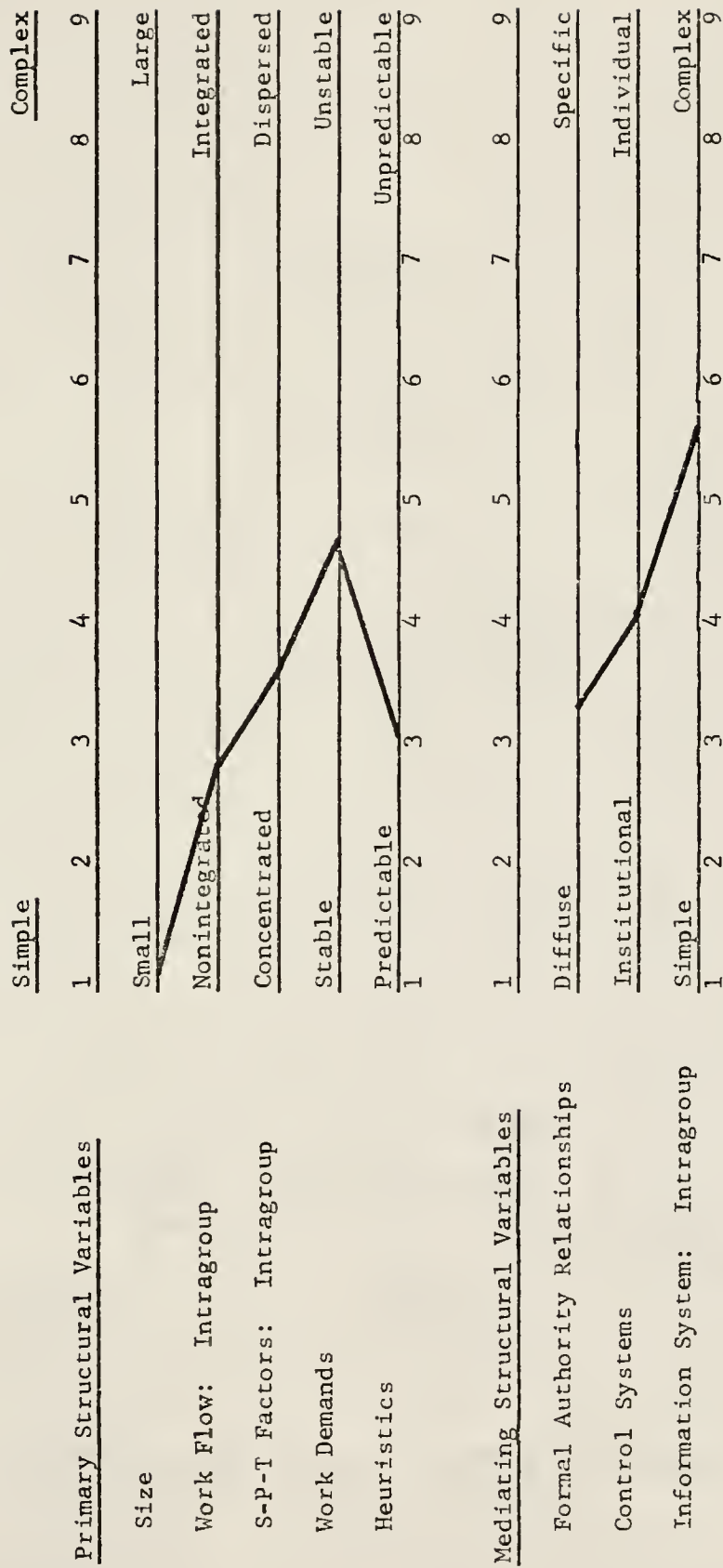


Fig. 14.--Primary and Mediating Structural Variable Profile, Work Group 8, Plant A.

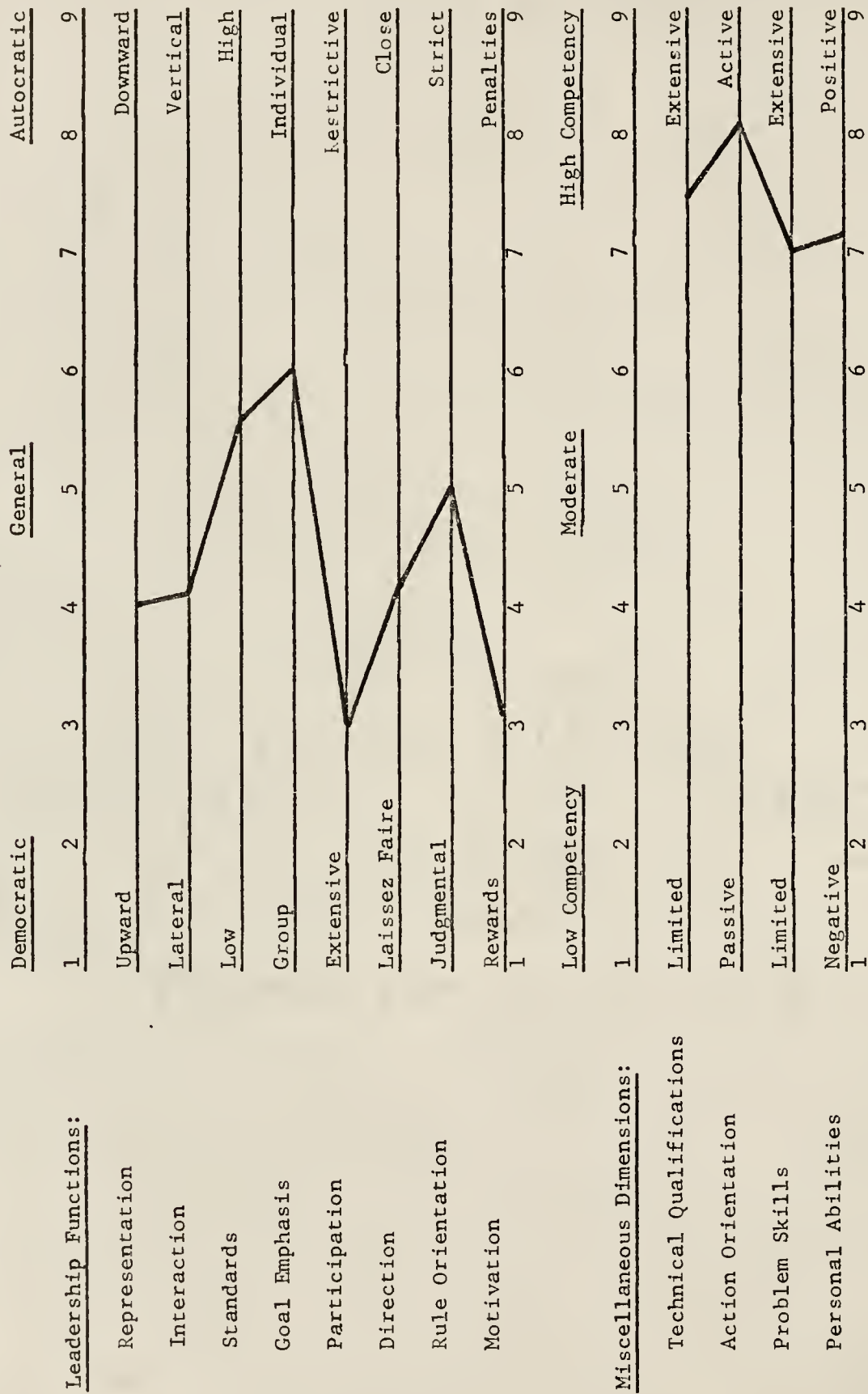


Fig. 15.--Plant Manager's Leadership Profile, Plant A.

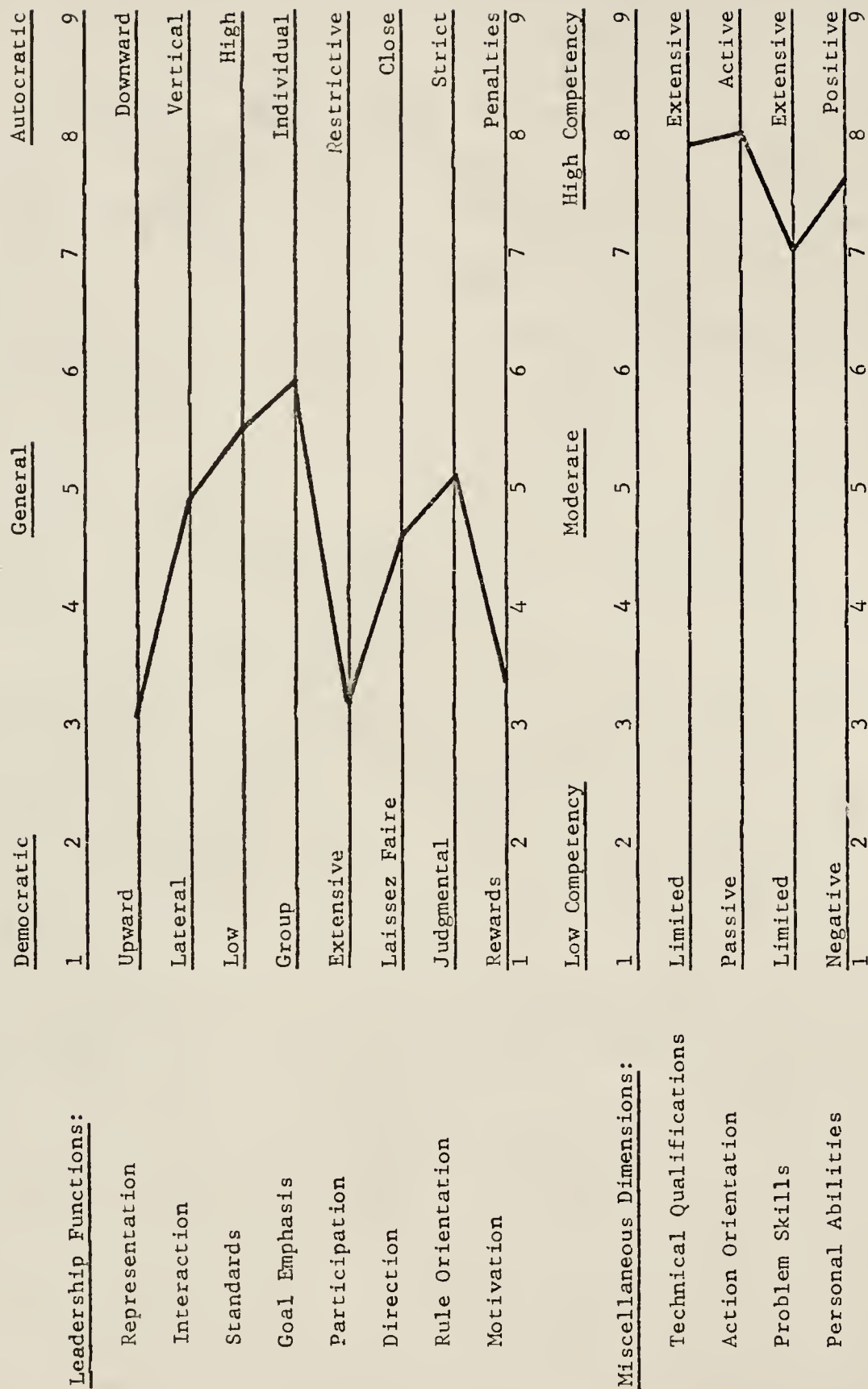


Fig. 17.--Second Level Supervisor's Leadership Profile, Work Group 2, Plant A.



Fig. 18.--Second Level Supervisor's Leadership Profile, Work Group 3, Plant A.

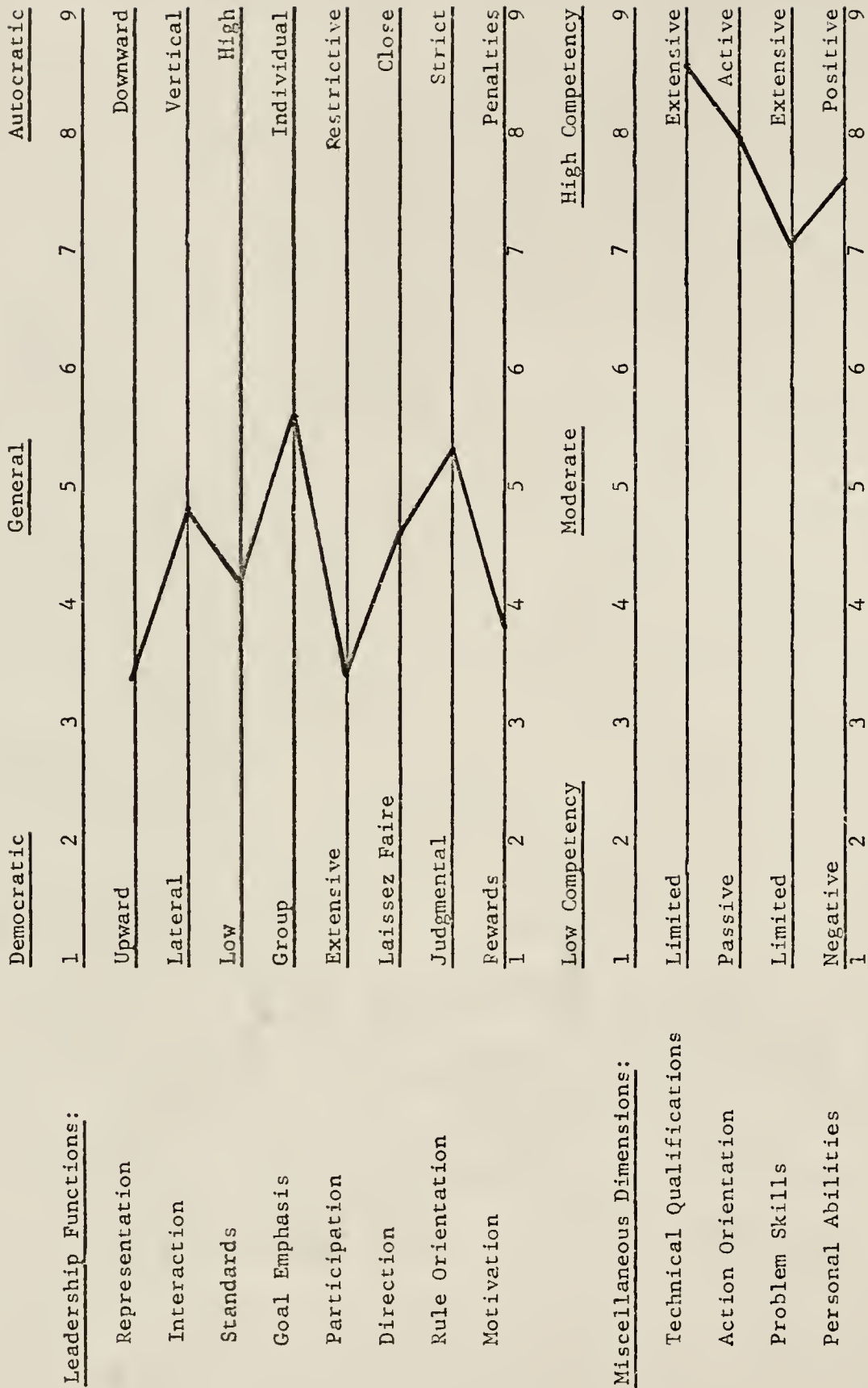


Fig. 19.--Second Level Supervisor's Leadership Profile, Work Group 4, Plant A.



Fig. 21.--Second Level Supervisor's Leadership Profile, Work Group 6, Plant A.



Fig. 22.--Second Level Supervisor's Leadership Profile, Work Group 7, Plant A.

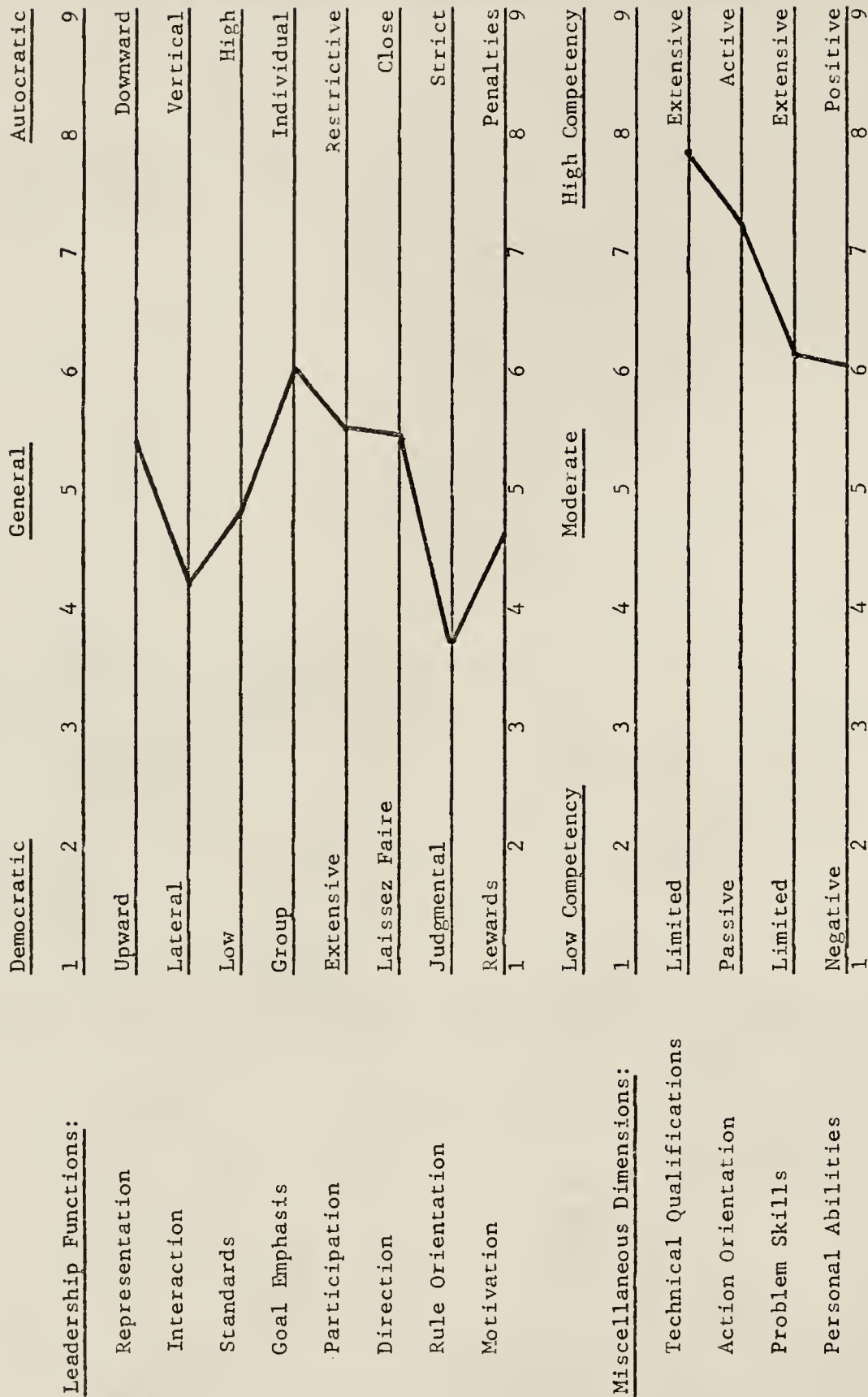


Fig. 23.--Second Level Supervisor's Leadership Profile, Work Group 8, Plant A.

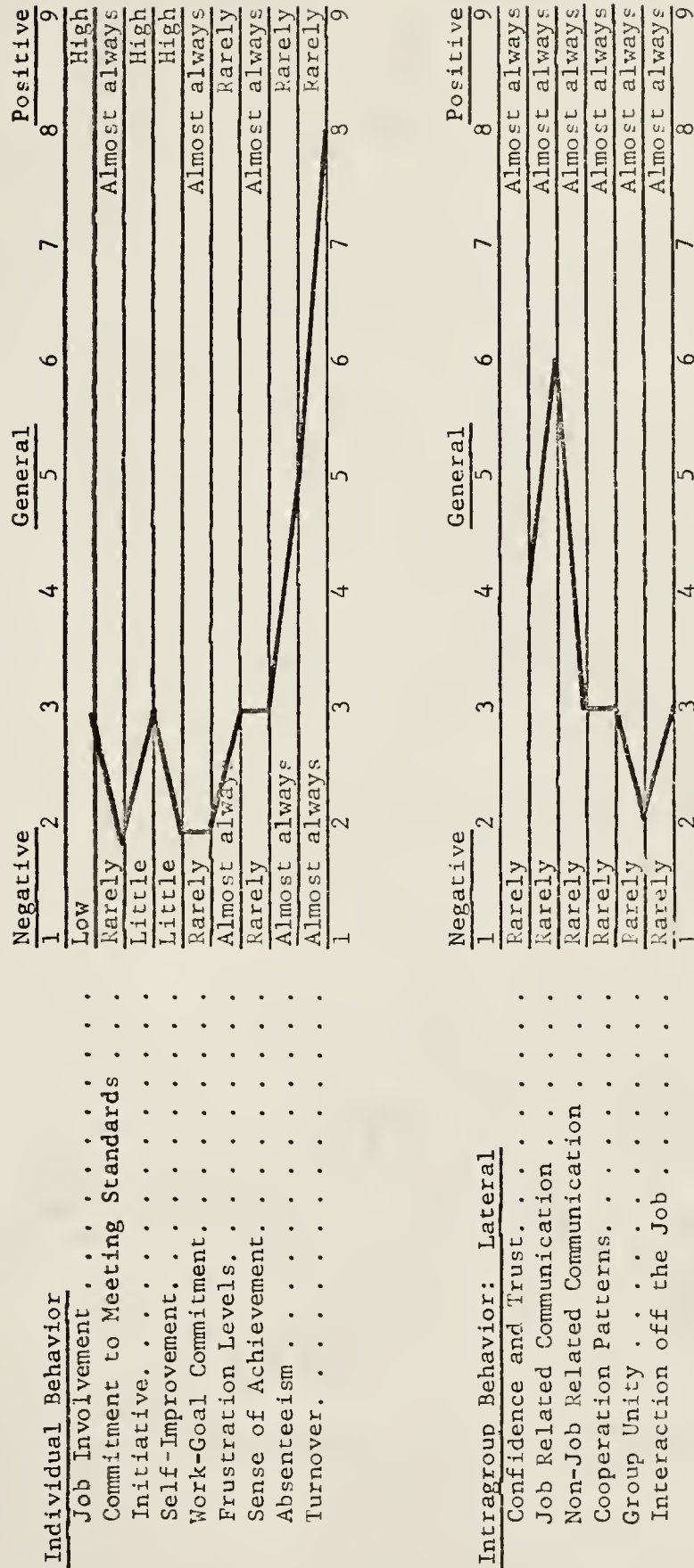


Fig. 24.--Behavioral Profile of Employees, Supervisor Response, Work Group 1, Plant A.

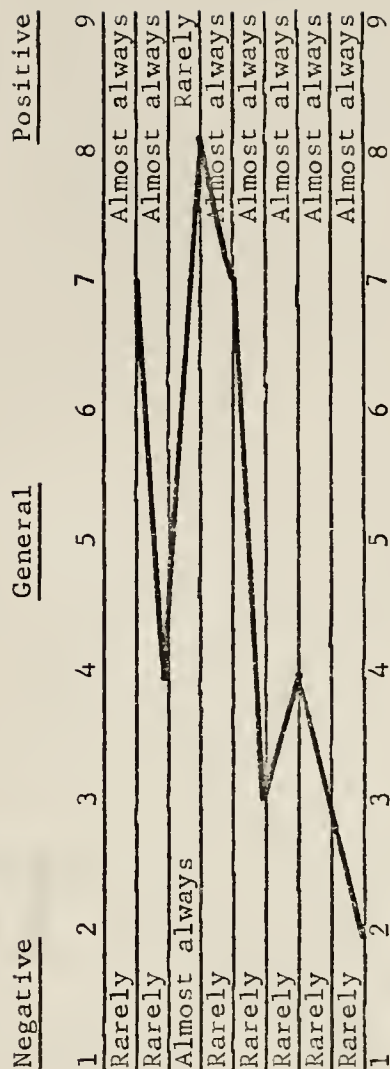
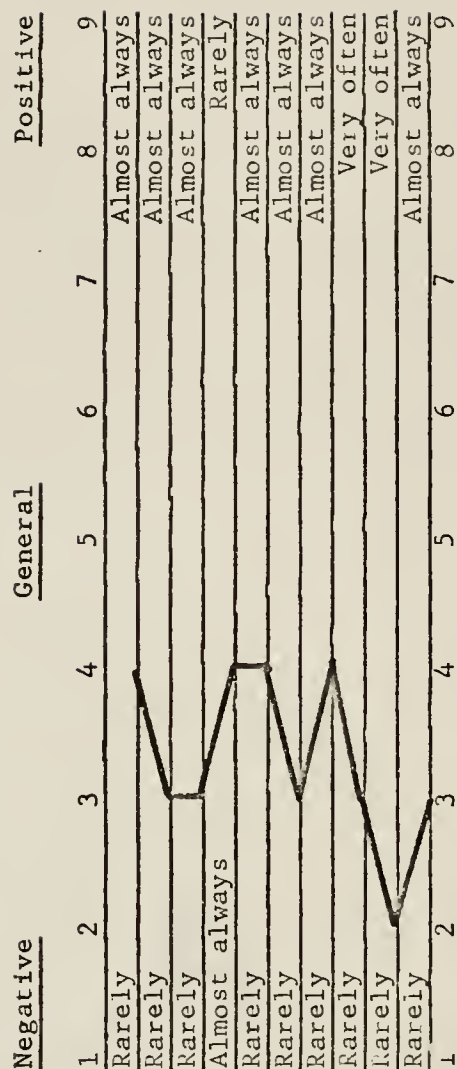


Fig. 24.--Continued

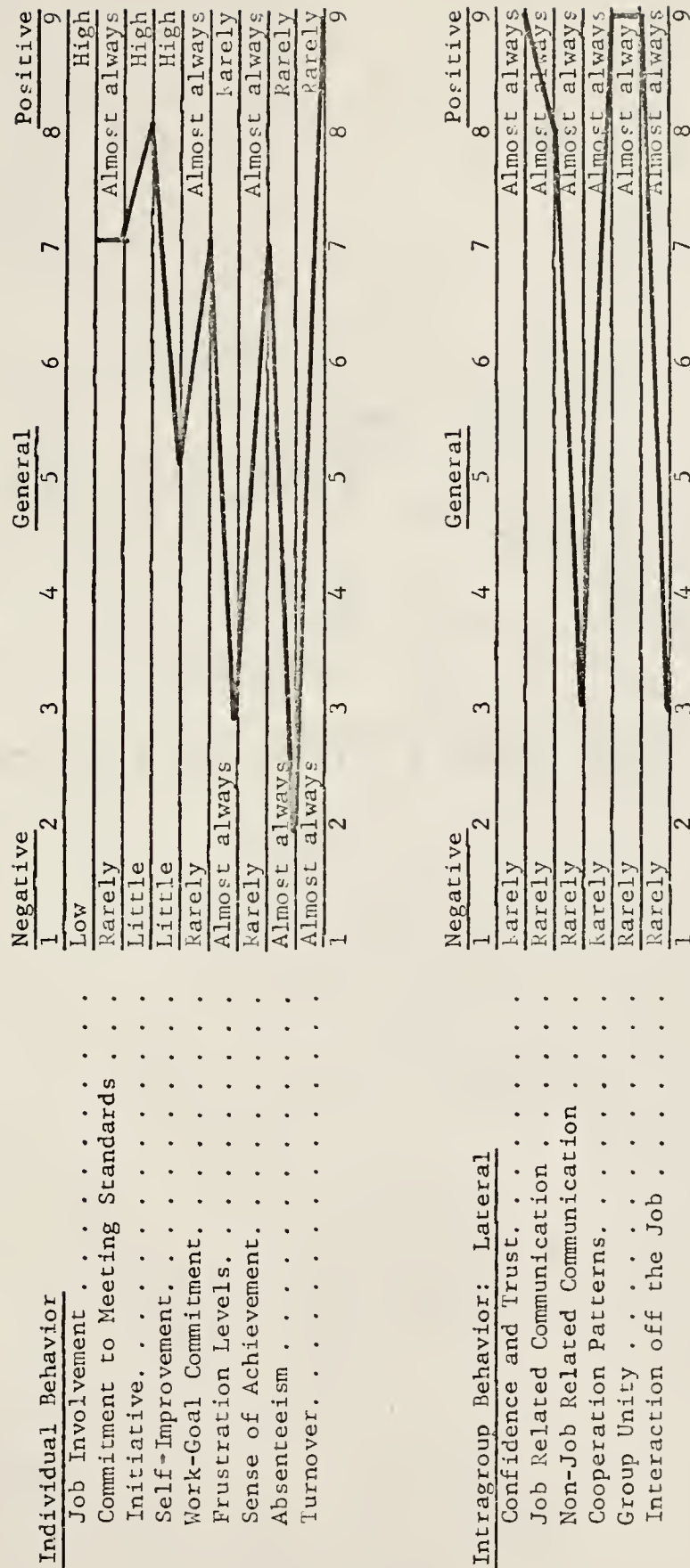


Fig. 25.--Behavioral Profile of Employees, Supervisor Response, Work Group 2, Plant A.

Intragroup Behavior: Vertical									
<u>Negative</u>		<u>General</u>						<u>Positive</u>	
1	2	3	4	5	6	7	8	9	
Rarely							Almost always		Trust and Confidence-- Downward. . . .
Rarely							Almost always		Trust and Confidence-- Upward. . . .
Rarely							Almost always		Requested Information.
Almost always							Rarely		Communication Screening.
Rarely							Almost always		Job Information.
Rarely							Almost always		Human Relations Information.
Rarely							Almost always		Cooperation and Teamwork
Rarely							Very often		Acceptance of Supervisor Decisions
Rarely							Very often		Acceptance of Higher Level Decisions . . .
Rarely							Almost always		Acceptance of Staff Decisions.
1	2	3	4	5	6	7	8	9	

Intergroup Behavior									
<u>Negative</u>		<u>General</u>						<u>Positive</u>	
1	2	3	4	5	6	7	8	9	
Rarely							Almost always		Confidence and Trust.
Rarely							Almost always		Communications Accuracy
Almost always							Rarely		Communications Screening.
Rarely							Almost always		Informal Communications
Rarely							Almost always		Cooperation and Teamwork.
Rarely							Almost always		Team Spirit
Rarely							Almost always		Acceptance of Decisions
Rarely							Almost always		Interaction Patterns.
1	2	3	4	5	6	7	8	9	

Fig. 25.--Continued

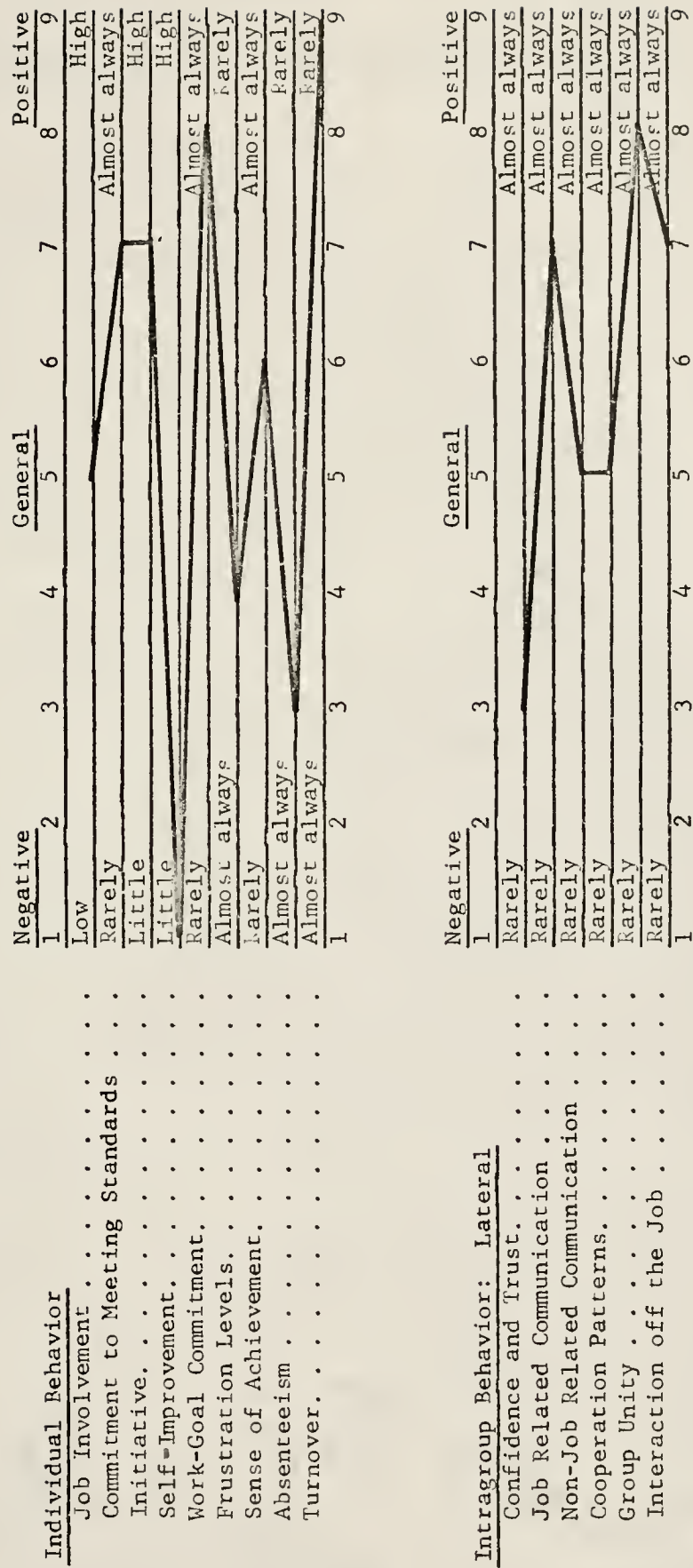
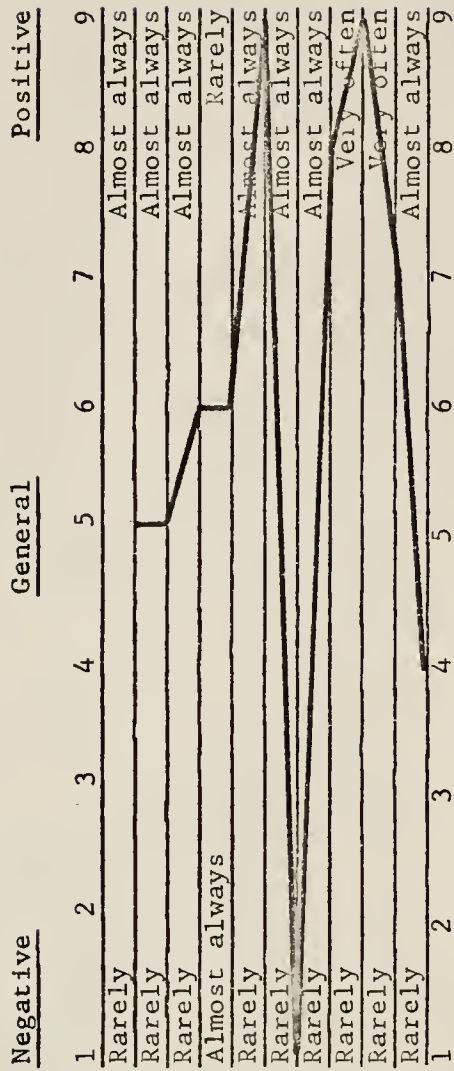
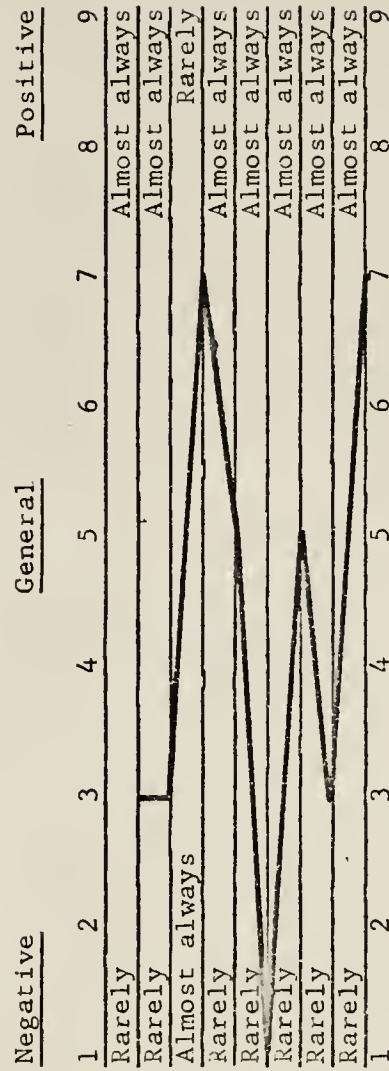


Fig. 26.--Behavioral Profile of Employees, Supervisor Response, Work Group 3, Plant A.



Trust and Confidence-- Downward. . . .
 Trust and Confidence-- Upward. . . .
 Requested Information.
 Communication Screening.
 Job Information.
 Human Relations Information.
 Cooperation and Teamwork.
 Acceptance of Supervisor Decisions. . . .
 Acceptance of Higher Level Decisions. . .
 Acceptance of Staff Decisions.



Confidence and Trust.
 Communications Accuracy.
 Communications Screening.
 Informal Communications.
 Cooperation and Teamwork.
 Team Spirit.
 Acceptance of Decisions.
 Interaction Patterns.

Fig. 26.--Continued

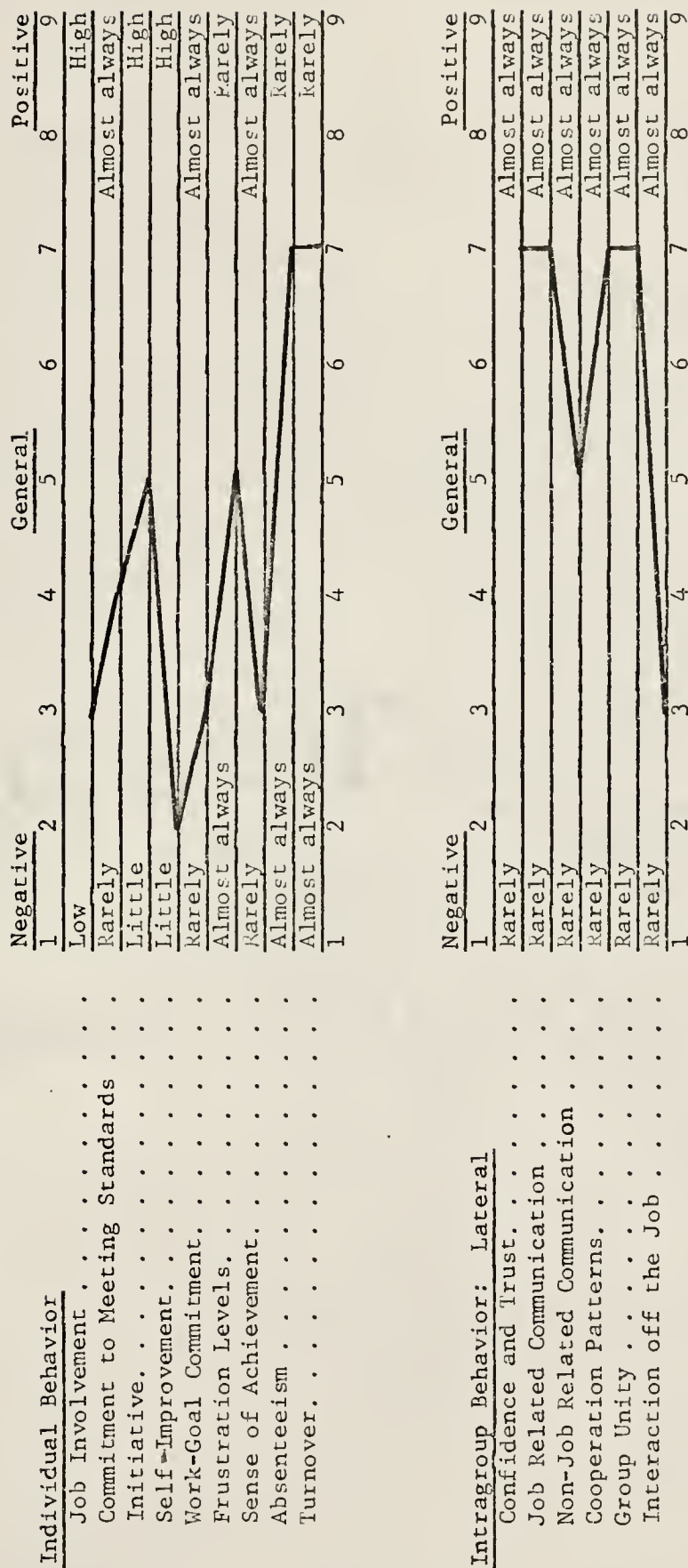


Fig. 27.--Behavioral Profile of Employees, Supervisor Response, Work Group 4, Plant A.

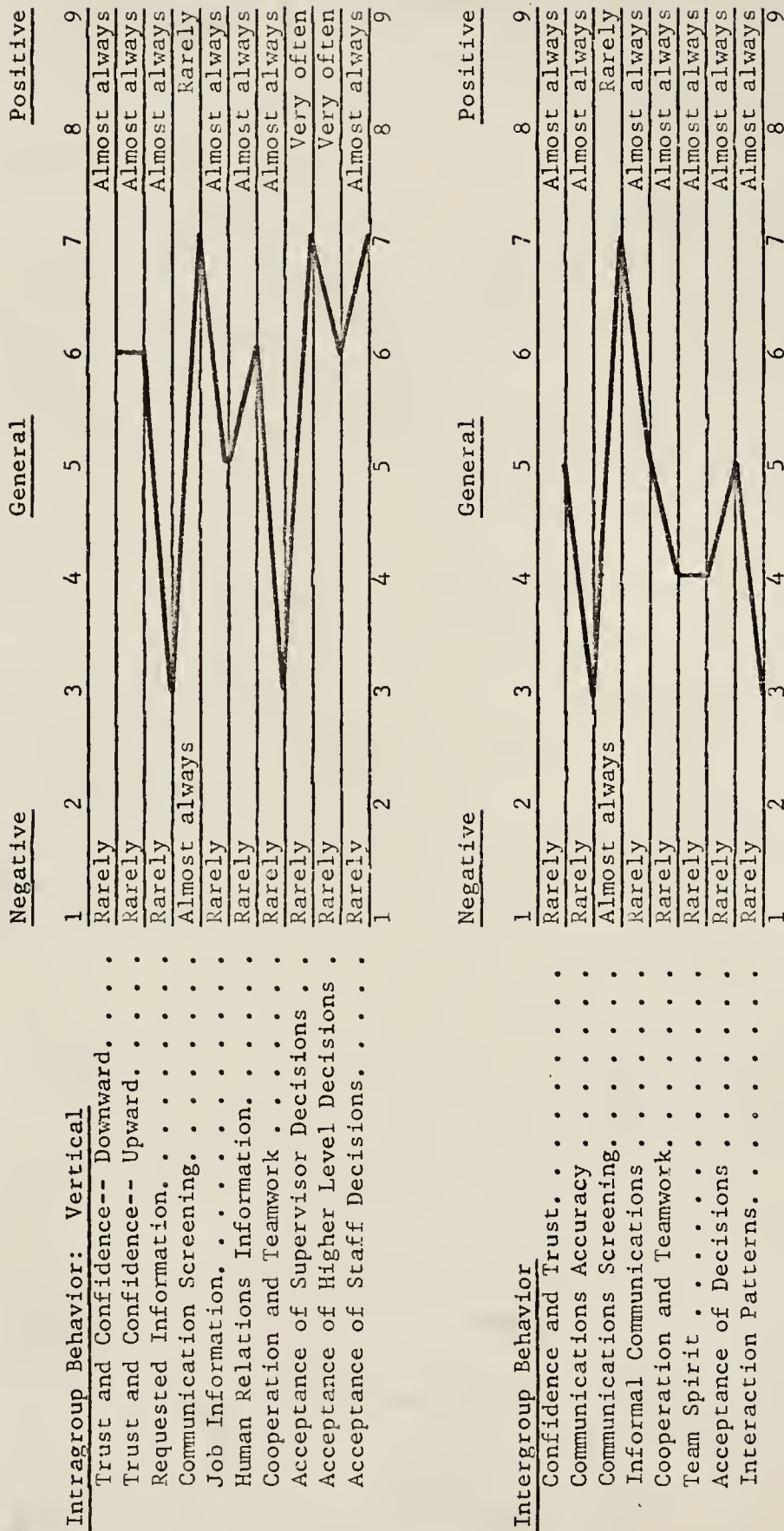
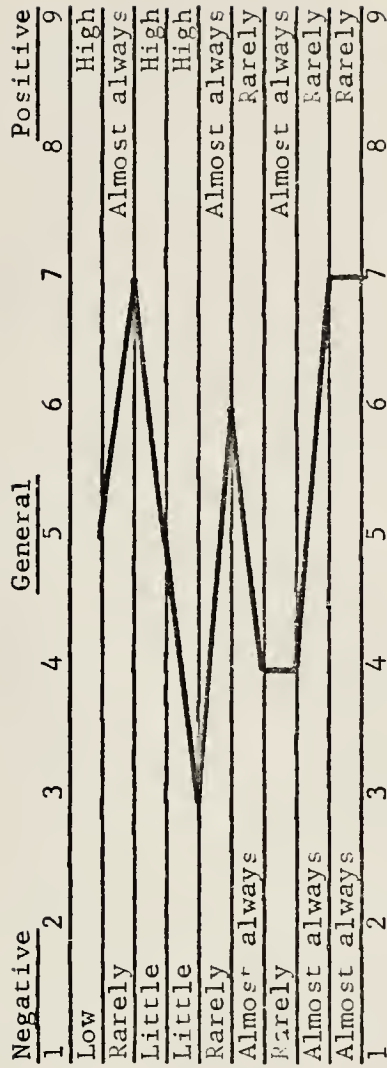


Fig. 27. --Continued

Individual Behavior									
	Negative		General		Positive				
	1	2	3	4	5	6	7	8	9
Job Involvement									
Commitment to Meeting Standards									
Initiative									
Self-Improvement									
Work-Goal Commitment									
Frustration Levels									
Sense of Achievement									
Absenteeism									
Turnover									



Intragroup Behavior: Lateral									
	Negative		General		Positive				
	1	2	3	4	5	6	7	8	9
Confidence and Trust									
Job Related Communication									
Non-Job Related Communication									
Cooperation Patterns									
Group Unity									
Interaction off the Job									

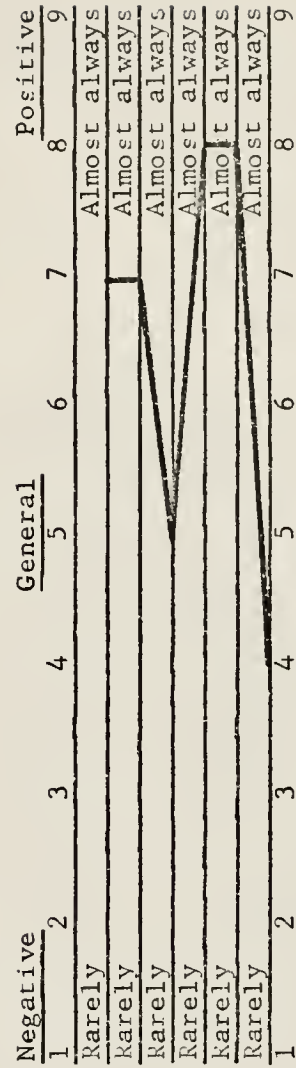


Fig. 28.--Behavioral Profile of Employees, Supervisor Response, Work Group 5, Plant A.

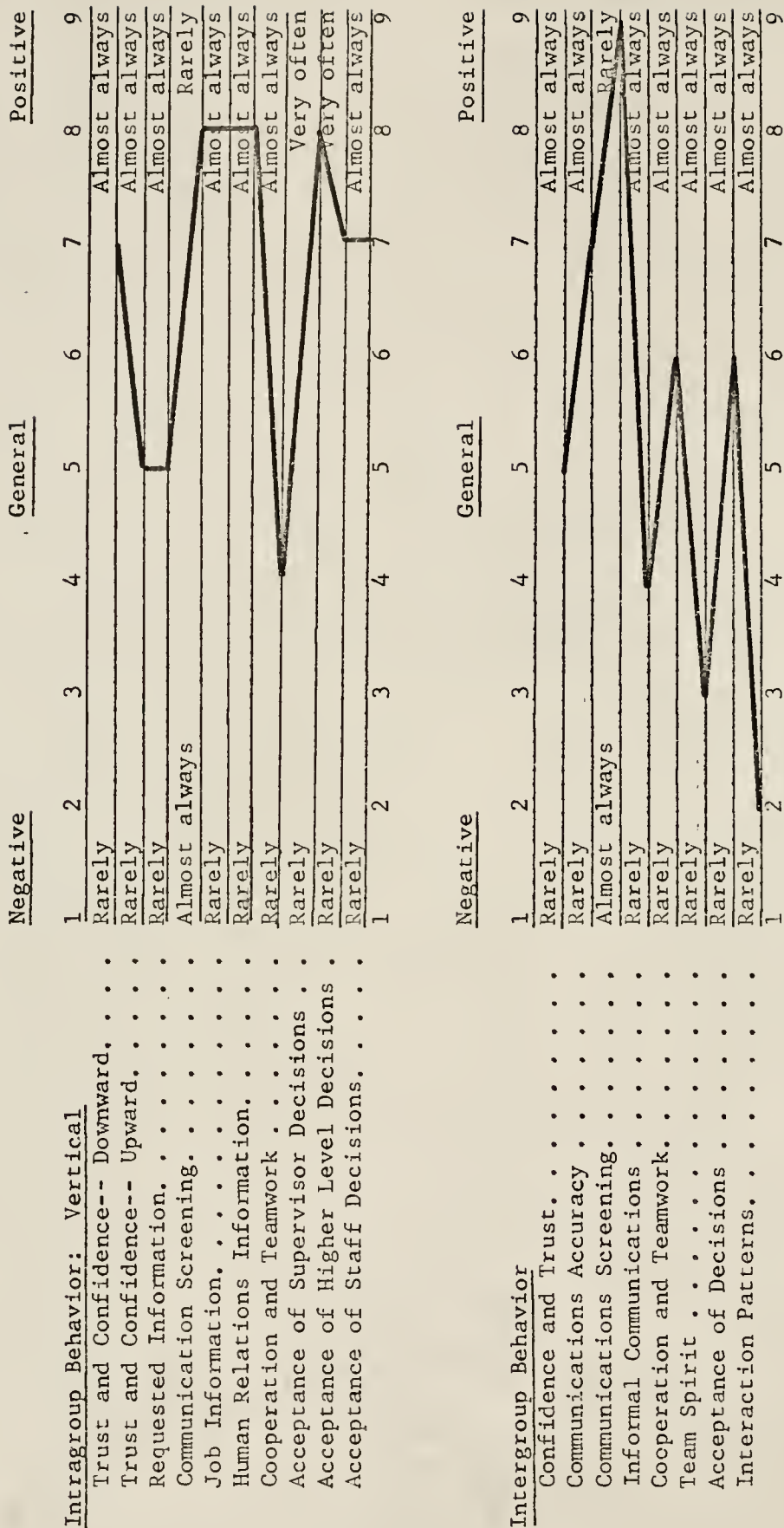


Fig. 28.--Continued

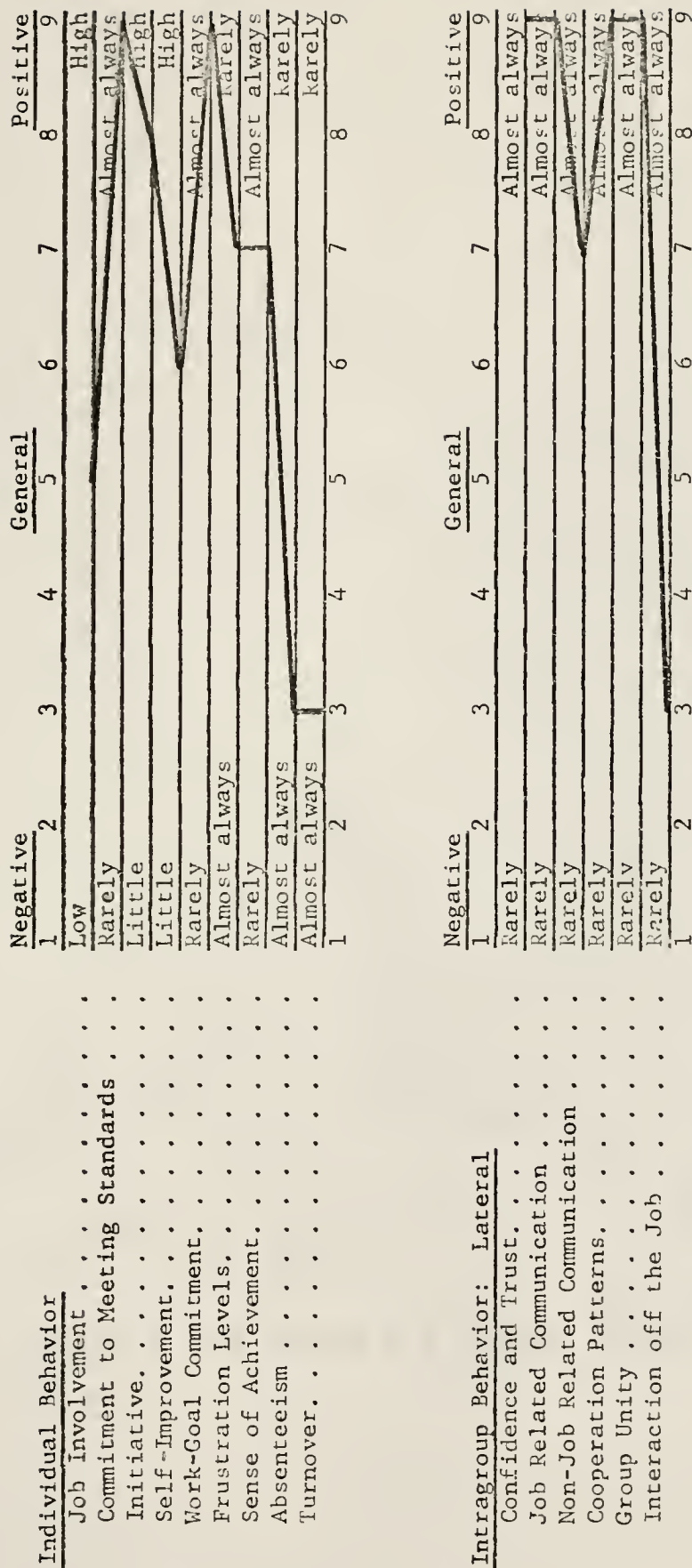


Fig. 29.--Behavioral Profile of Employees, Supervisor Response, Work Group 6, Plant A.

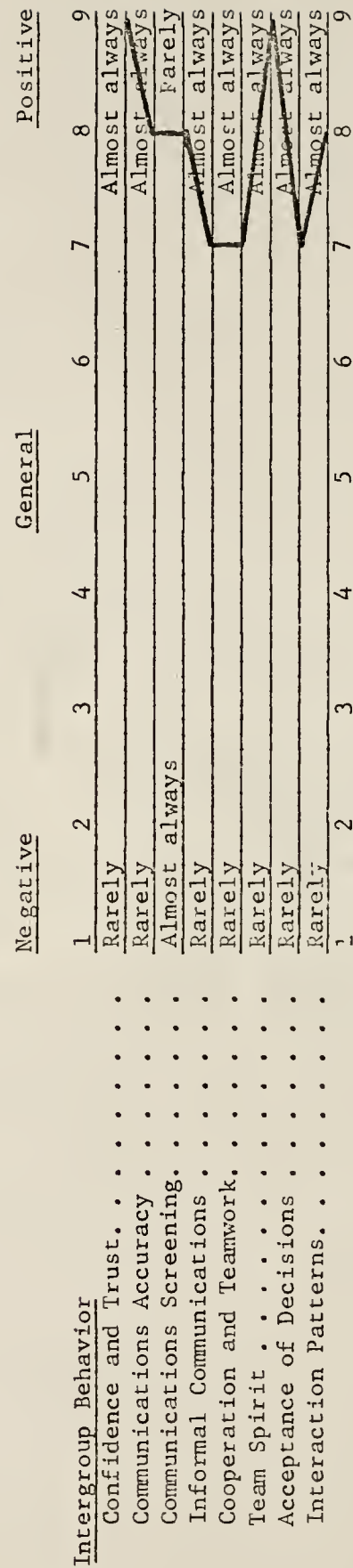
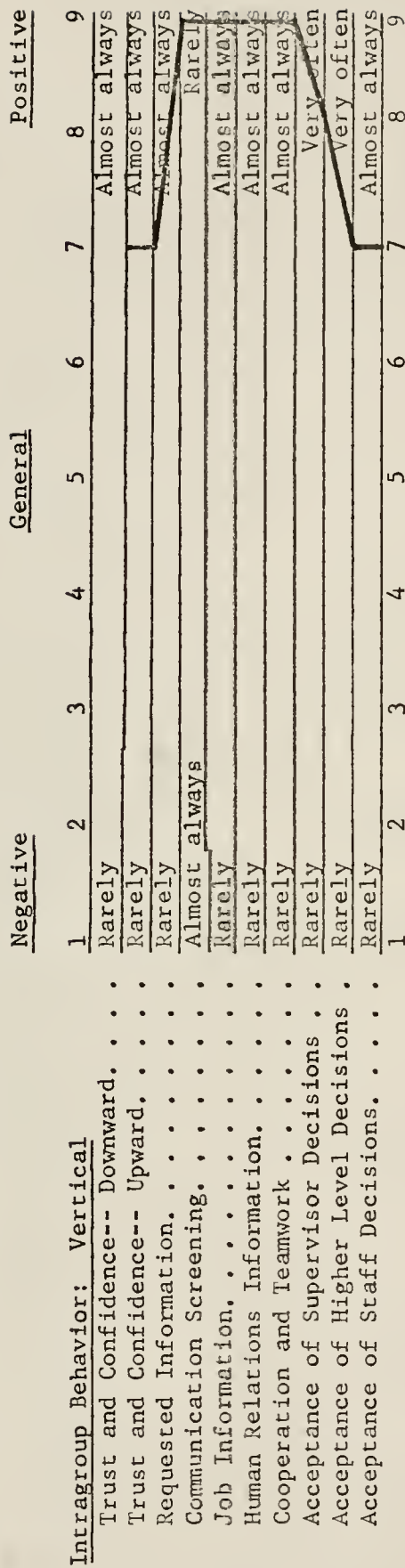


Fig. 29.--Continued

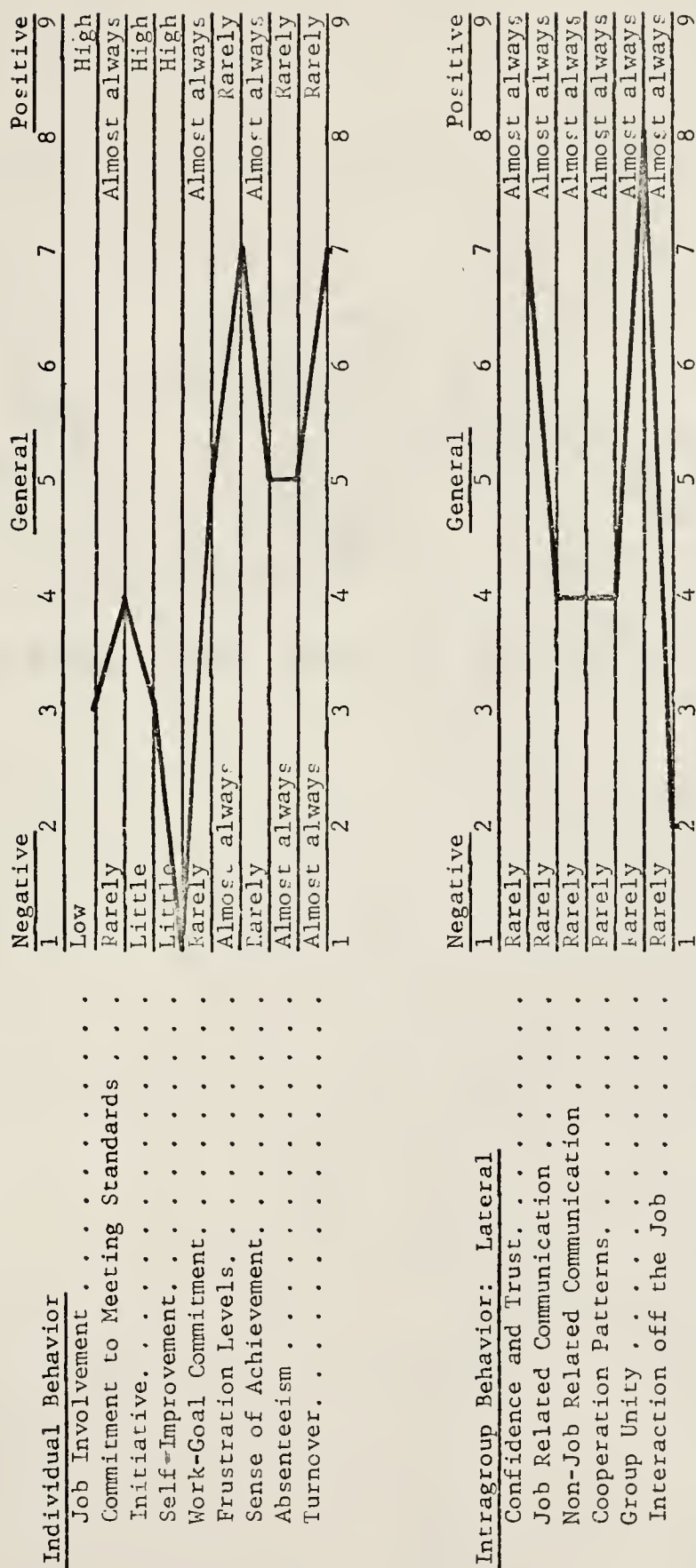


Fig. 30.--Behavioral Profile of Employees, Supervisor Response, Work Group 7, Plant A.

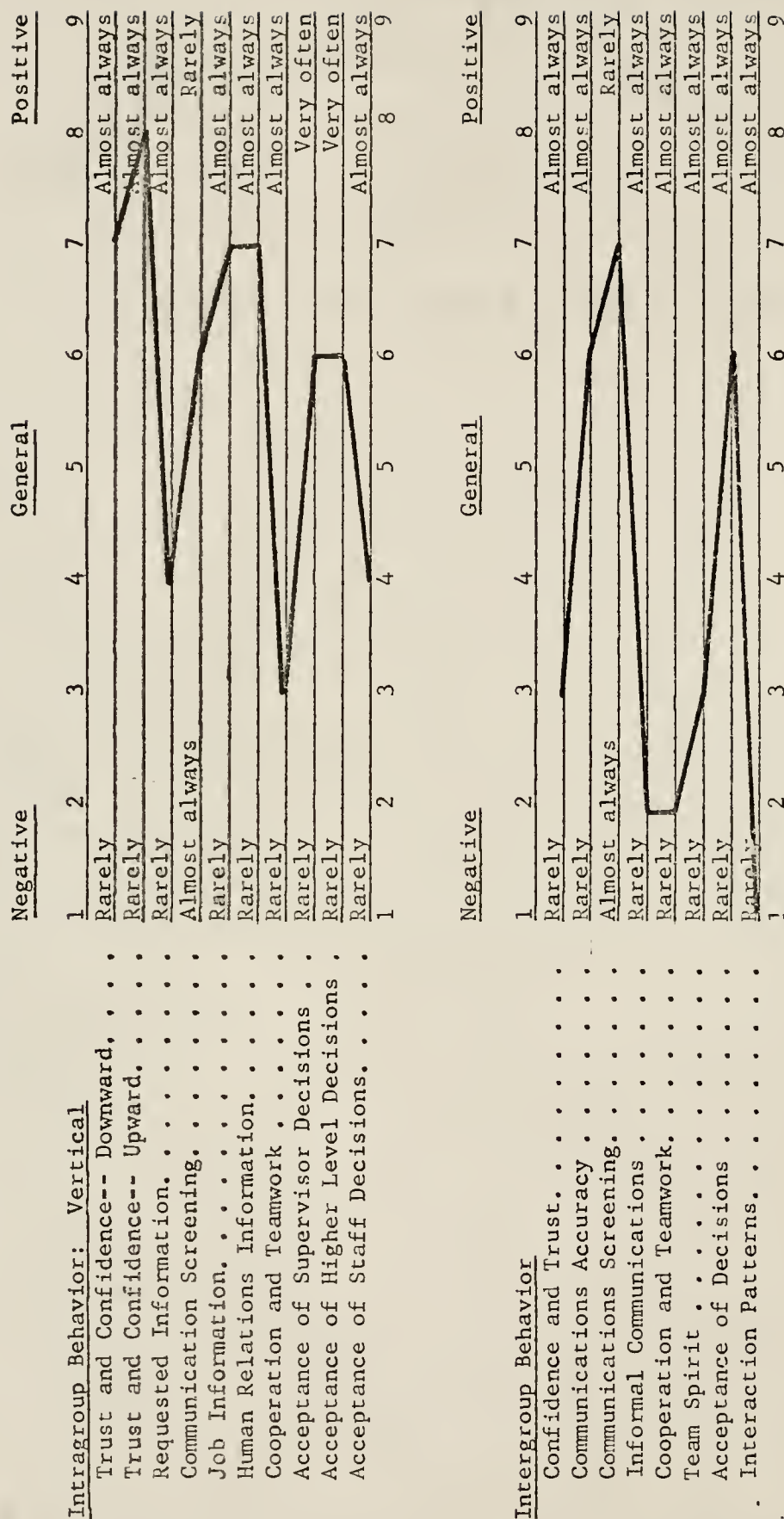


Fig. 30.--Continued

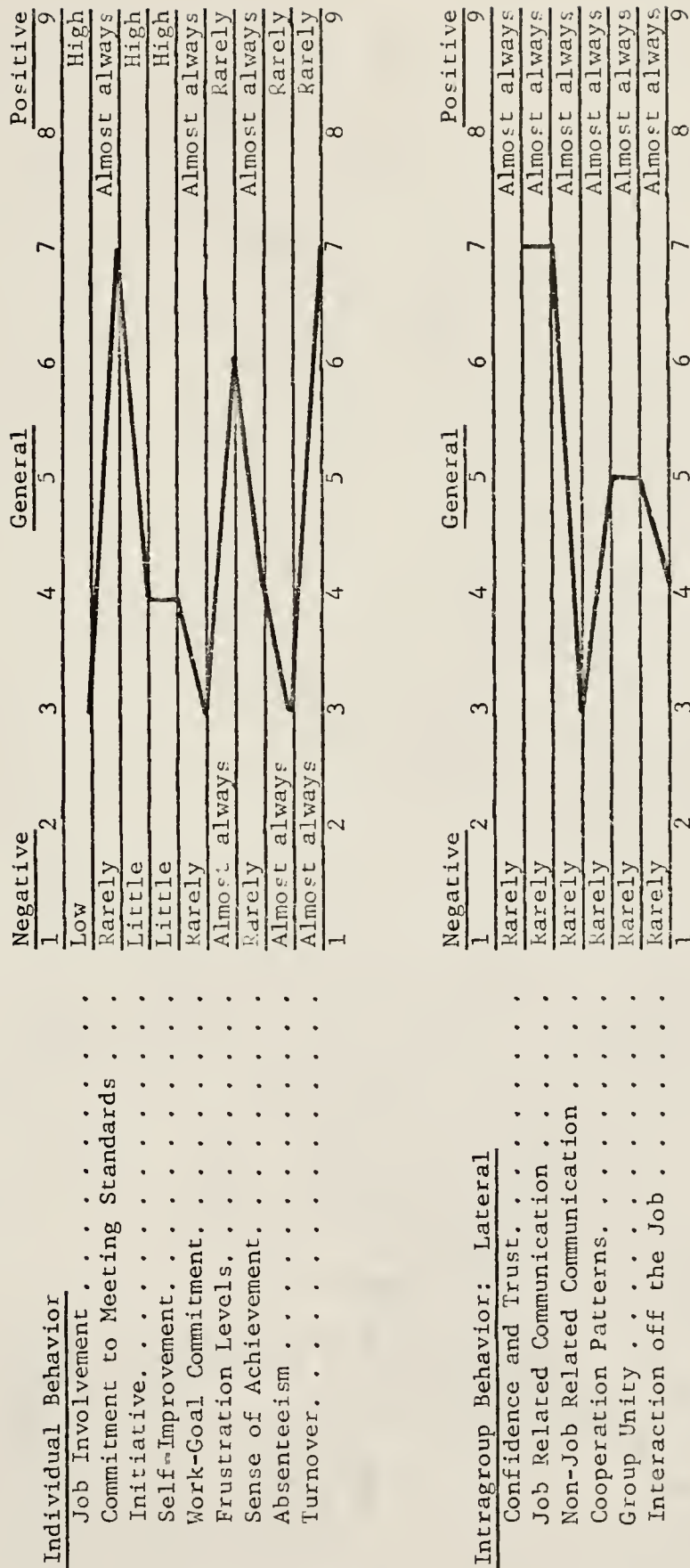


Fig. 31.--Behavioral Profile of Employees, Supervisor Response, Work Group 8, Plant A.

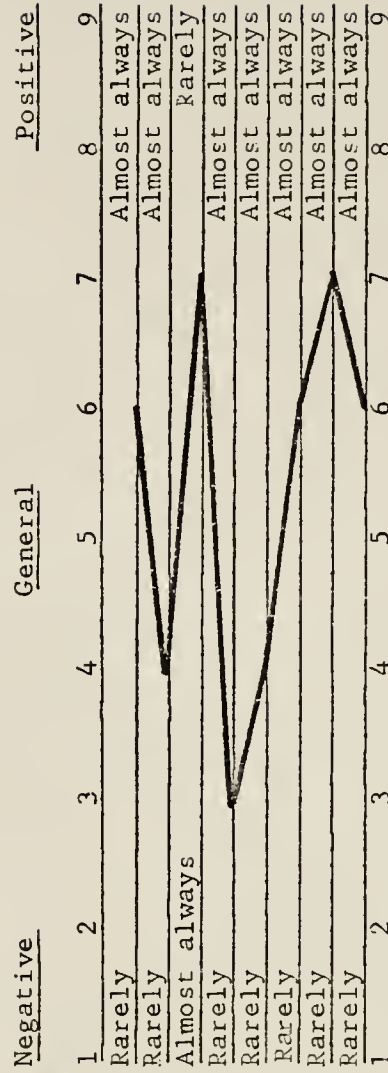
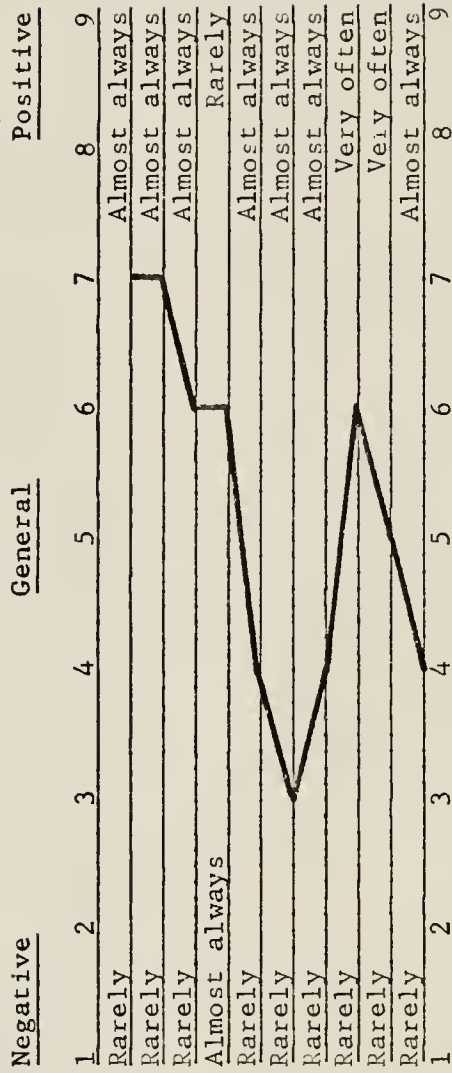


Fig. 31.--Continued

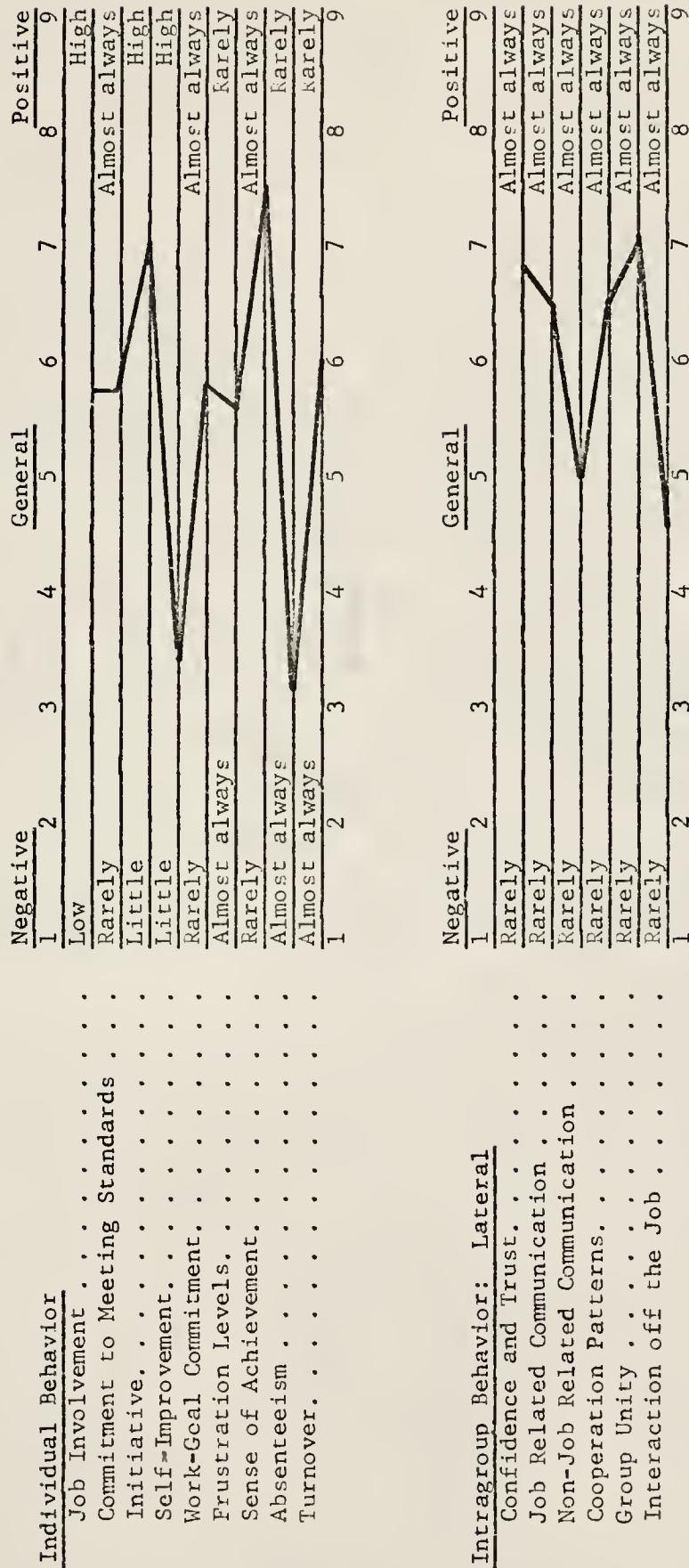


Fig. 32.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 1, Plant A.

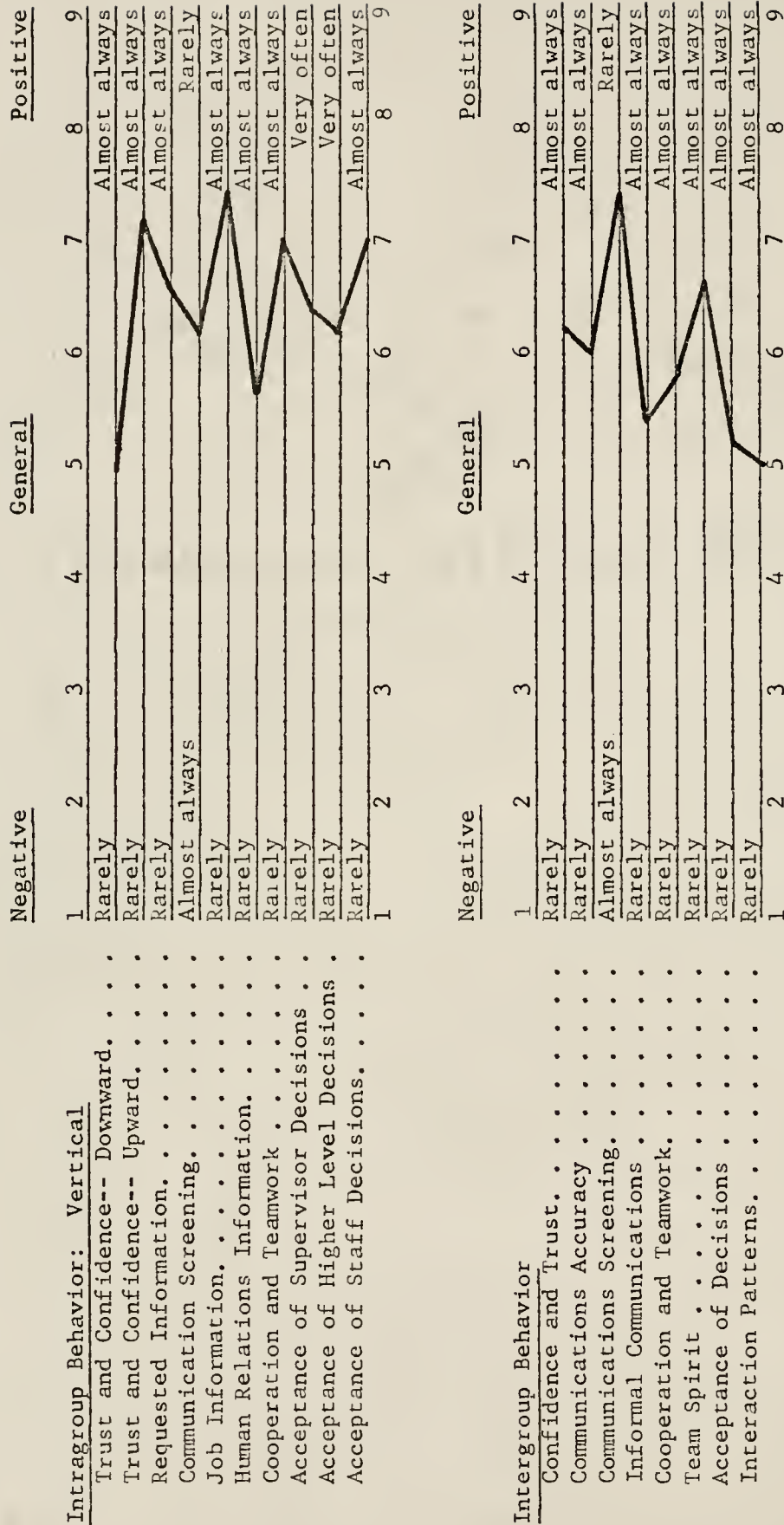


Fig. 32.--Continued

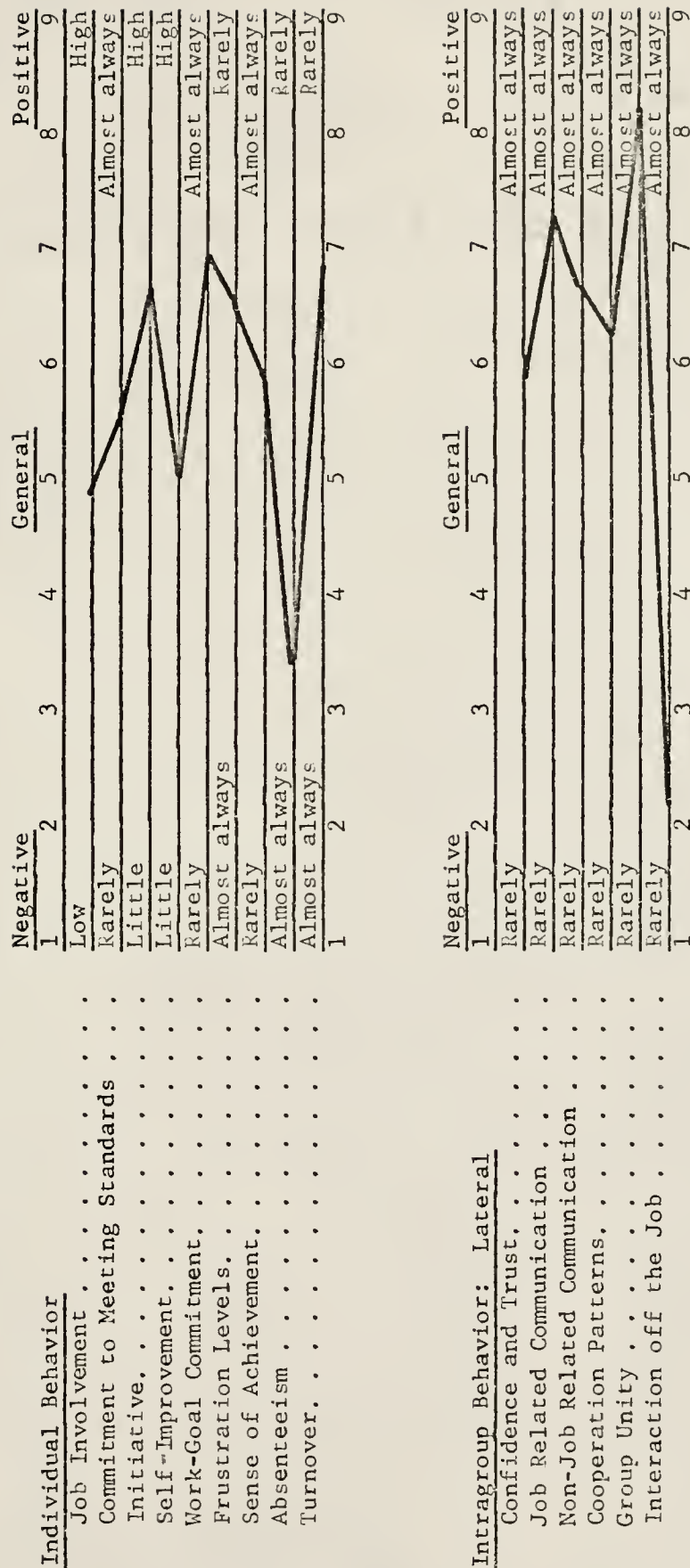


Fig. 33.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 2, Plant A.

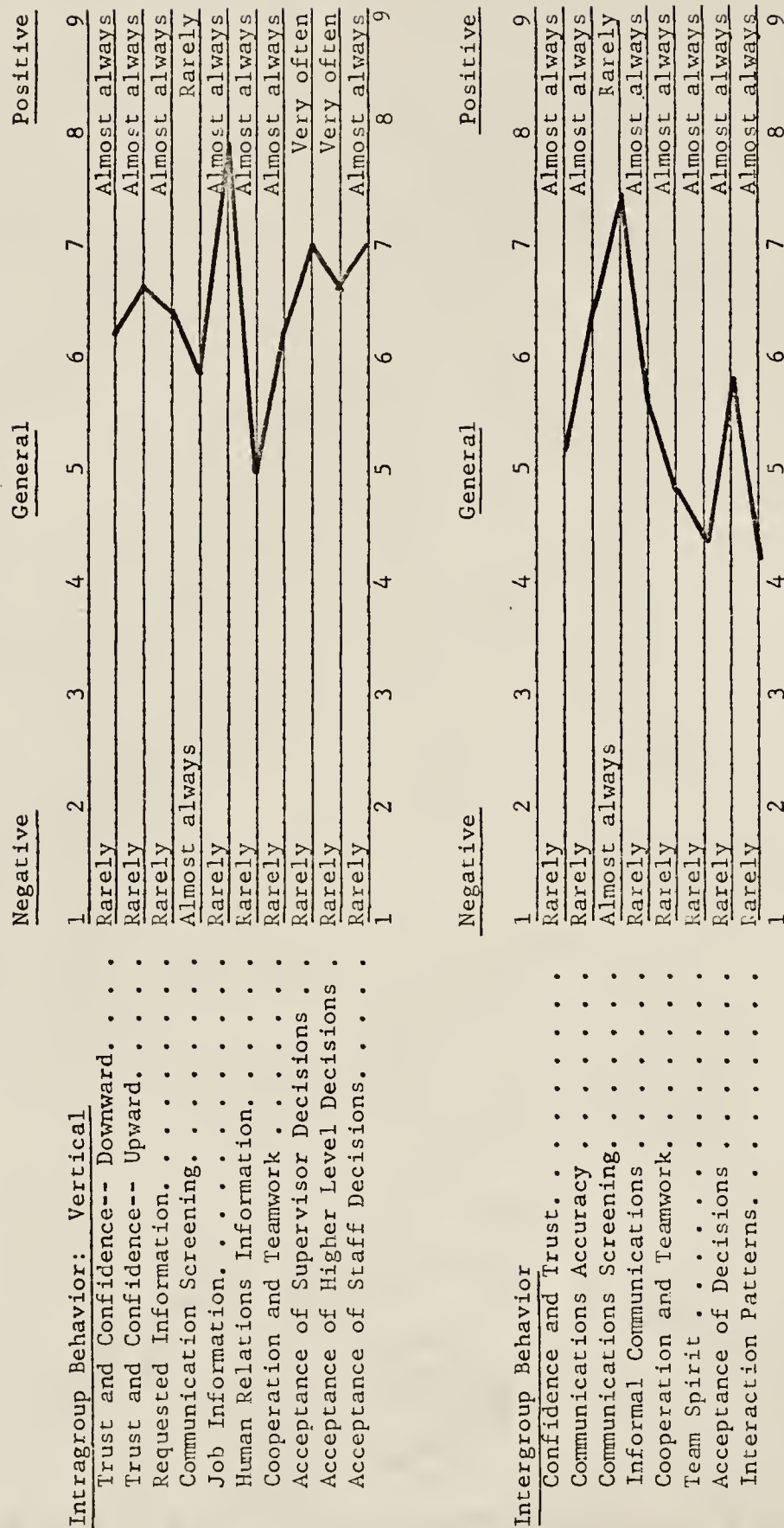


Fig. 33.--Continued

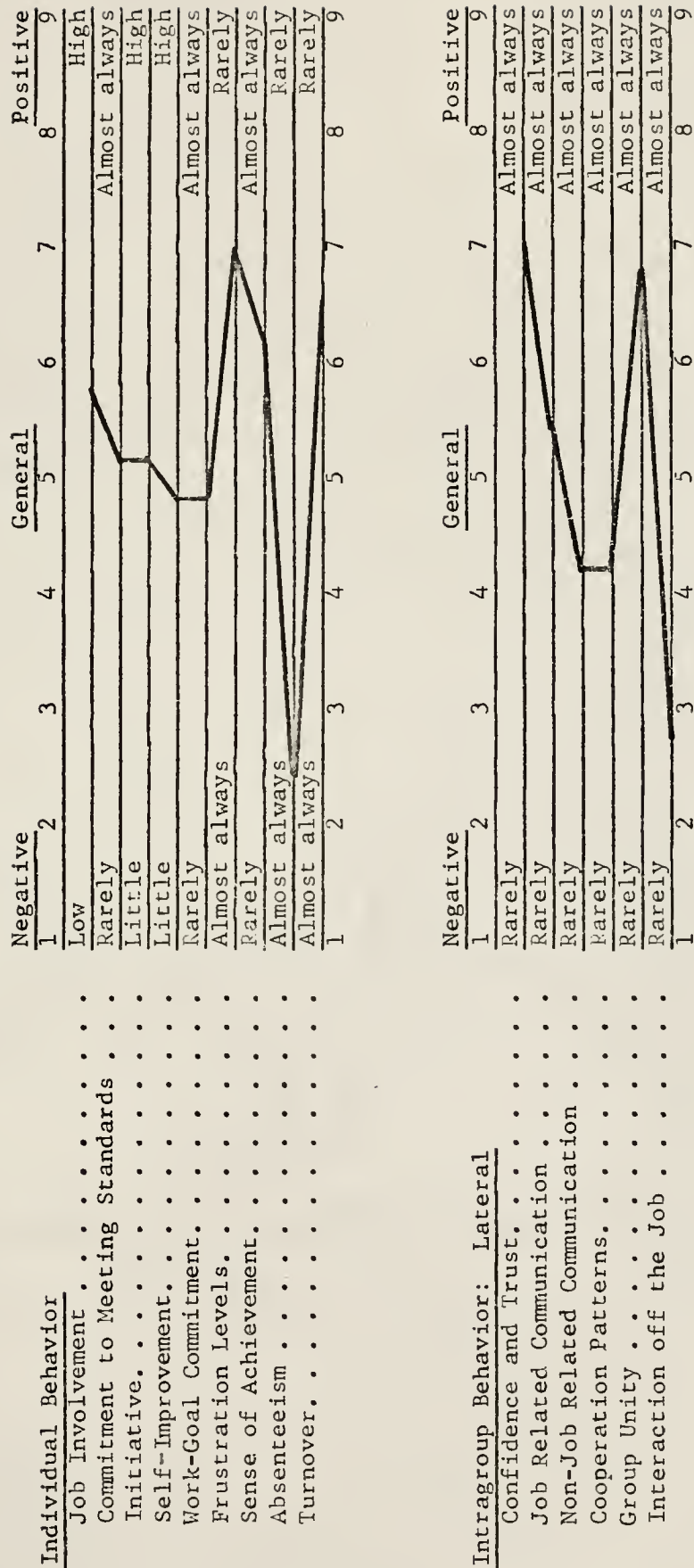


Fig. 34.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 3, Plant A.

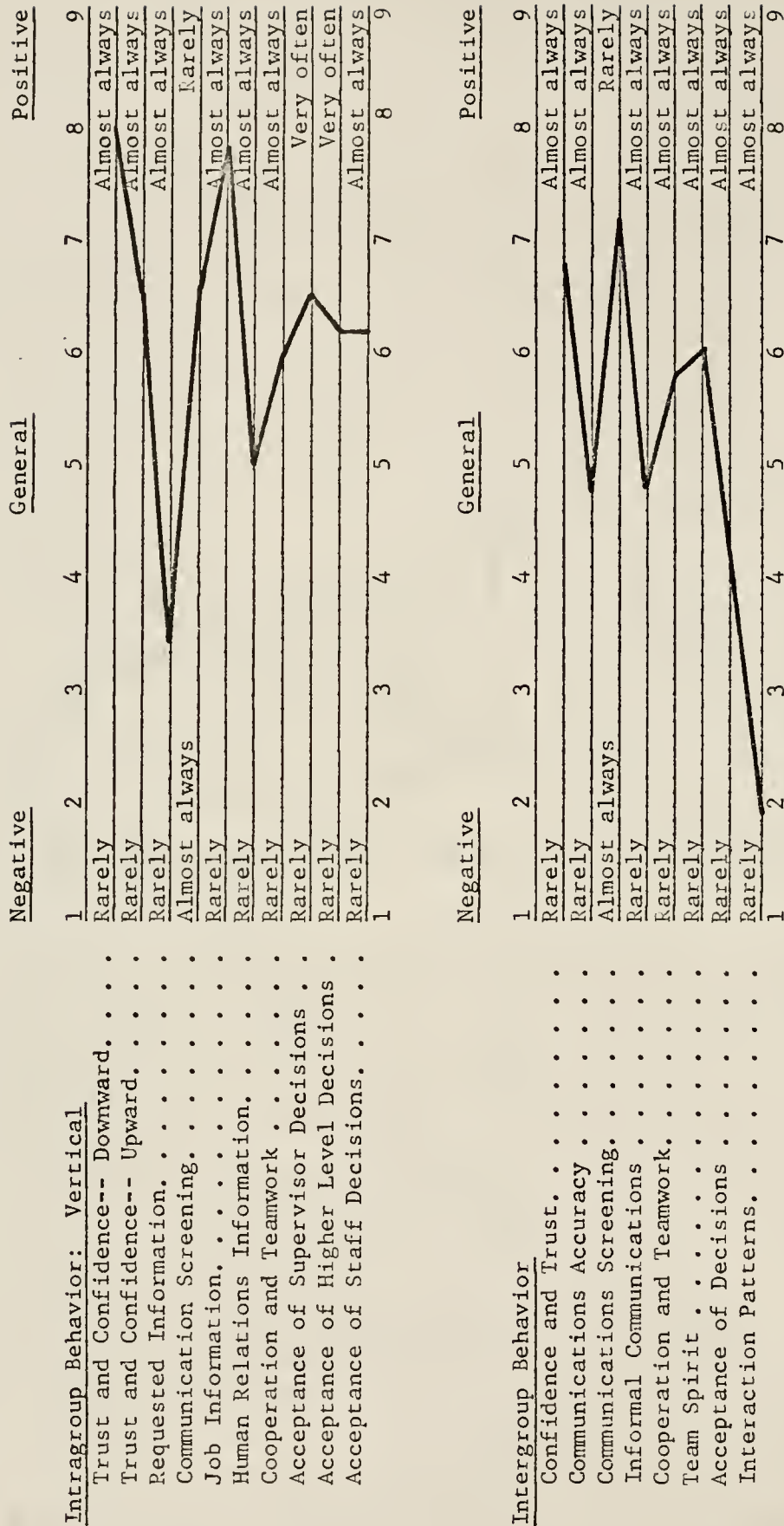


Fig. 34.--Continued

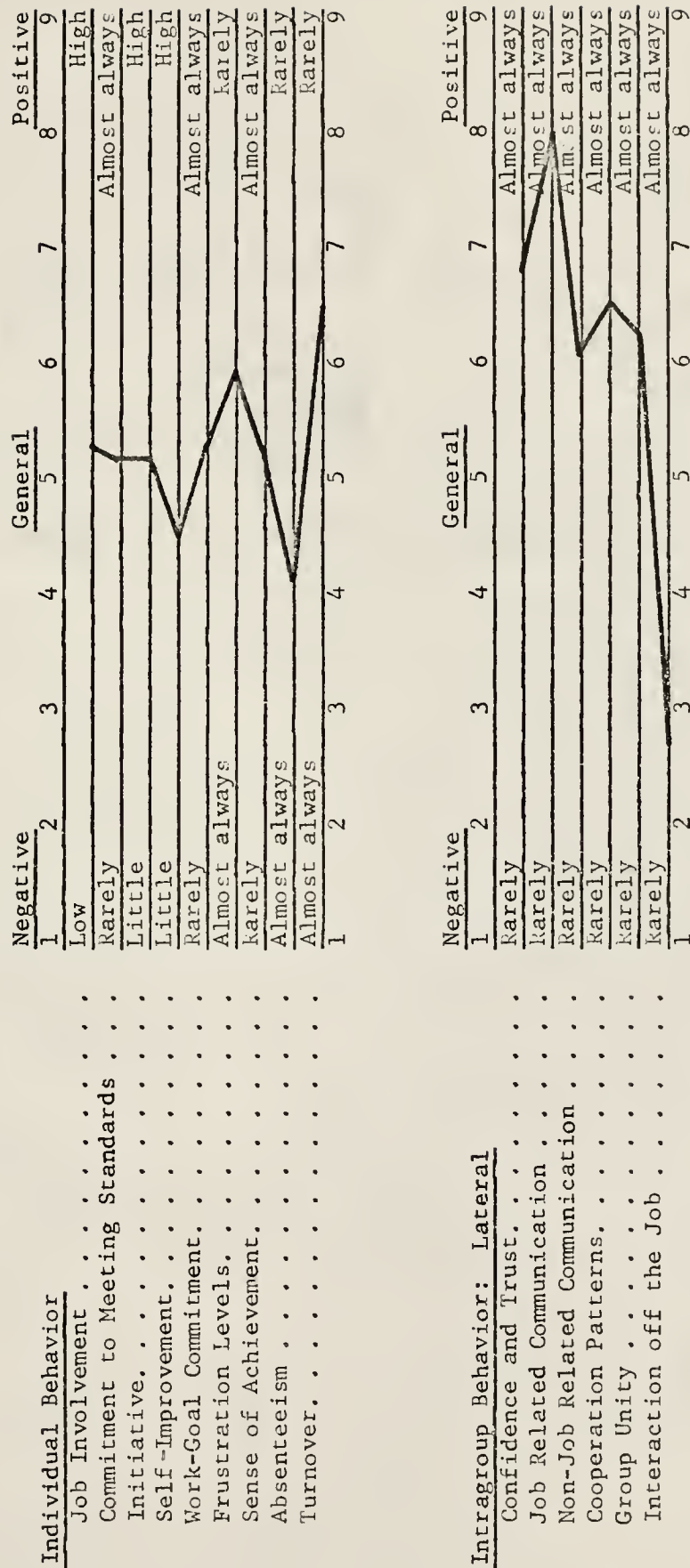


Fig. 35.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 4, Plant A.

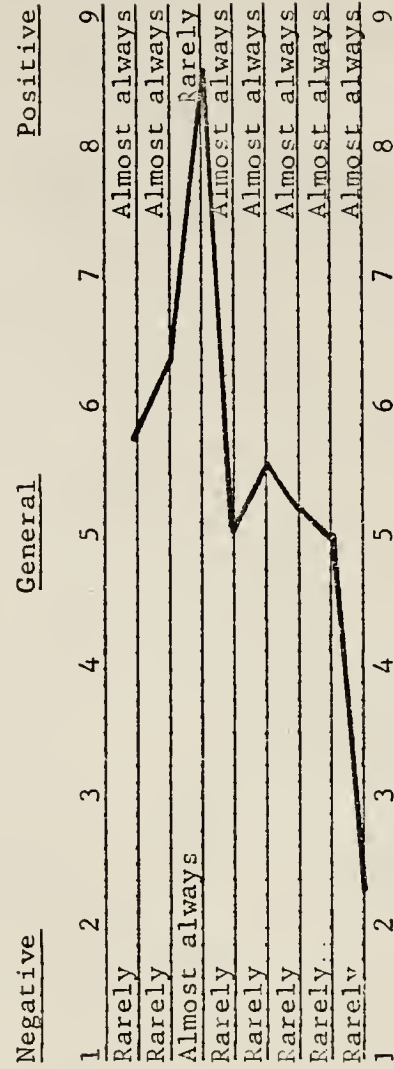
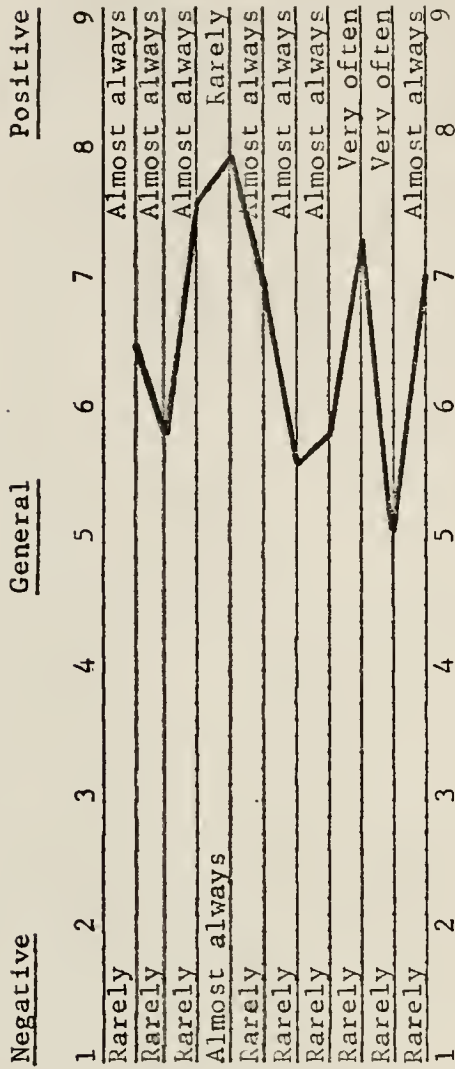


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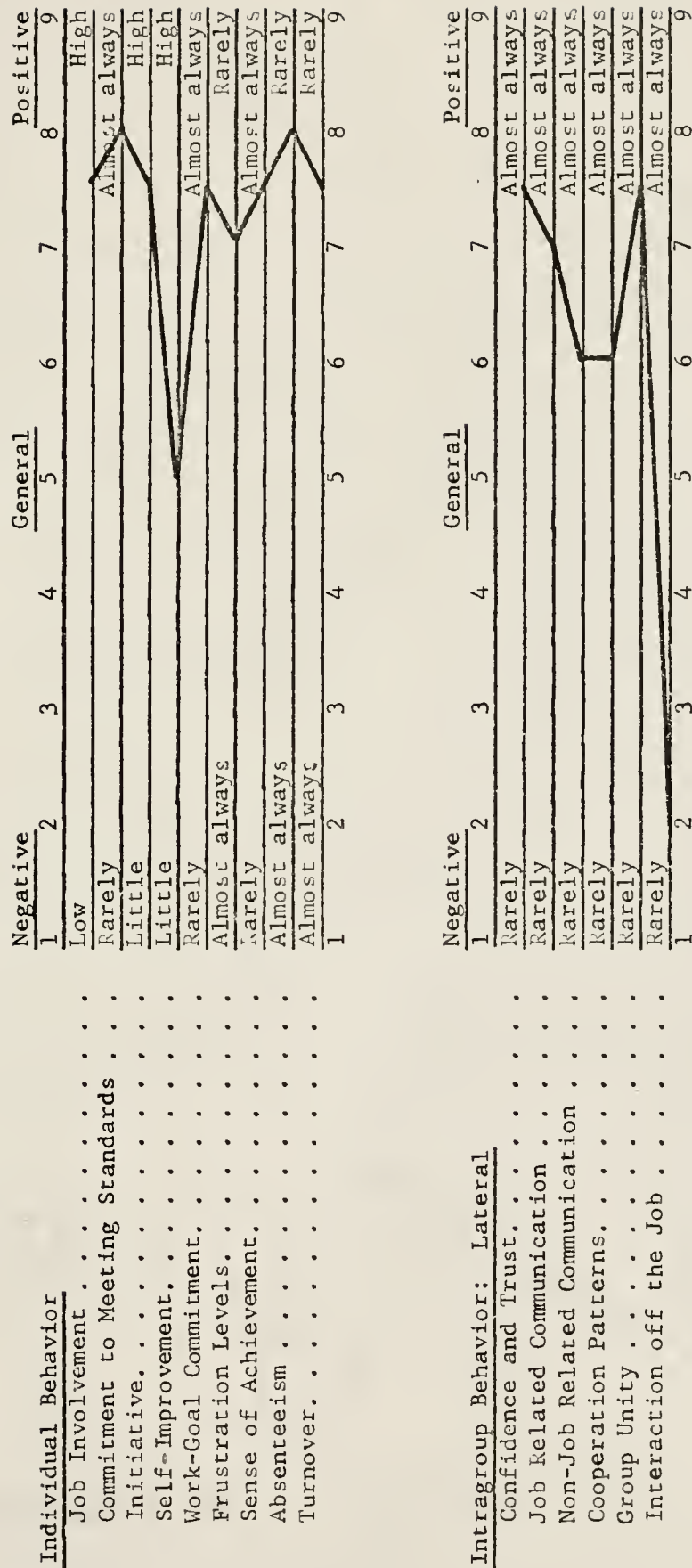


Fig. 36.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 5, Plant A.

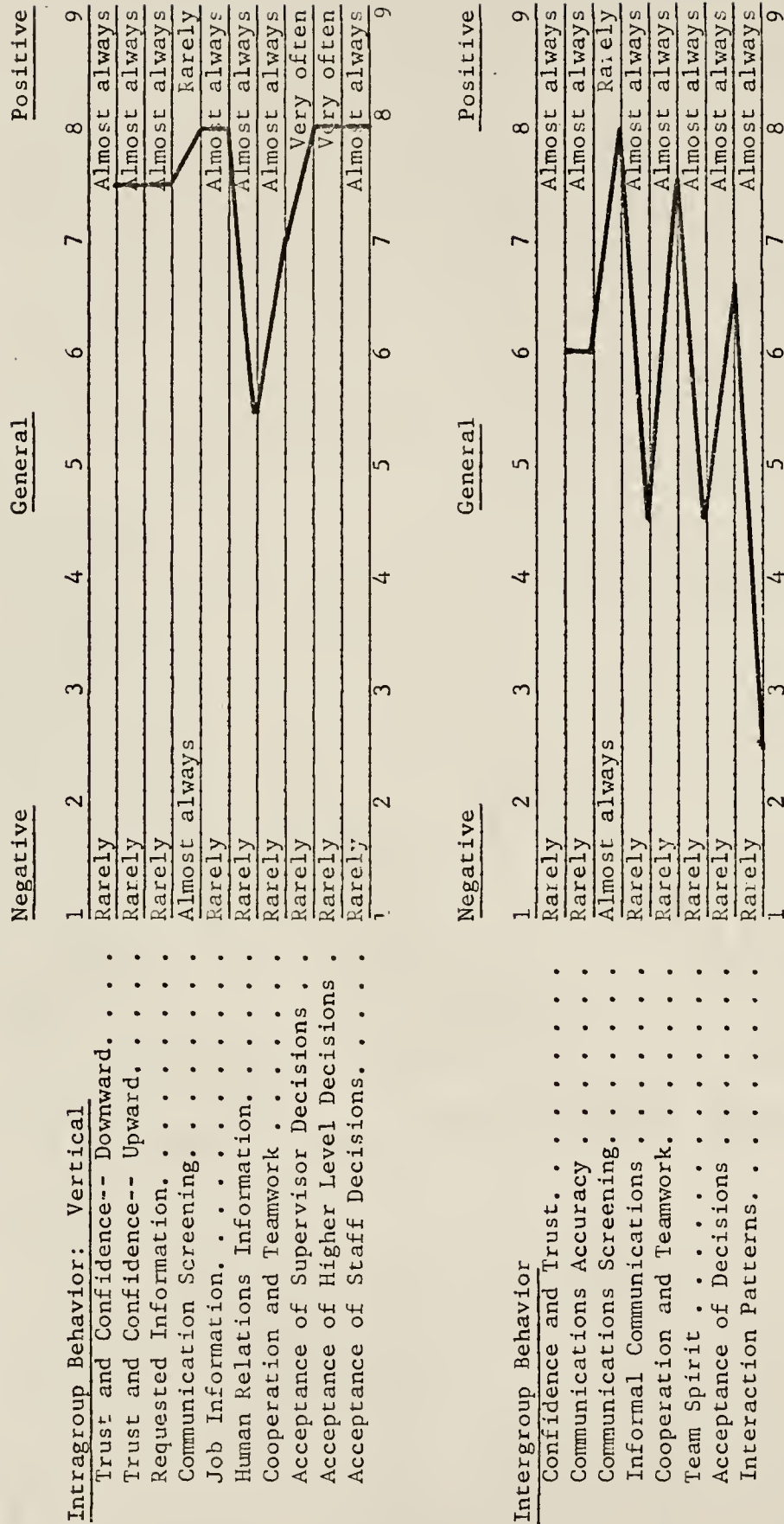


Fig. 36.--Continued

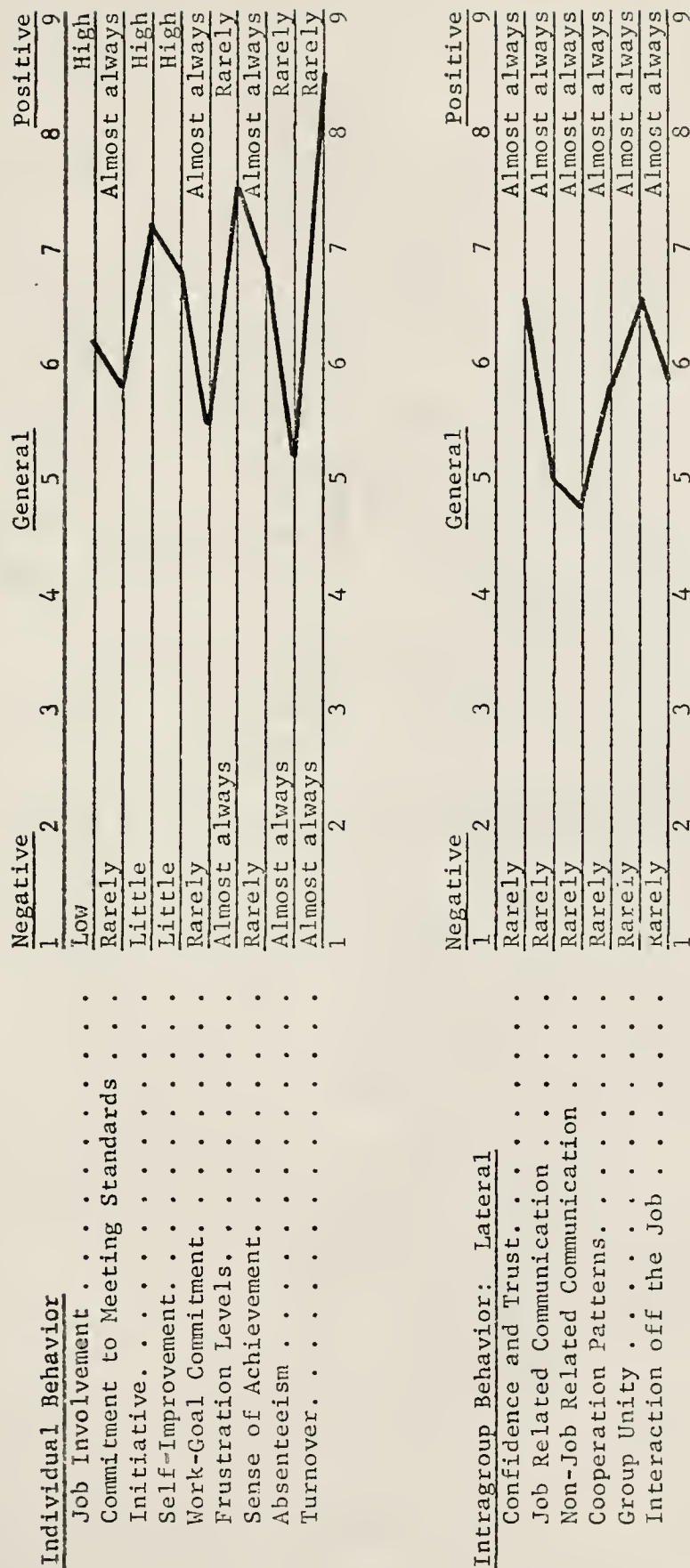


Fig. 37.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 6, Plant A.

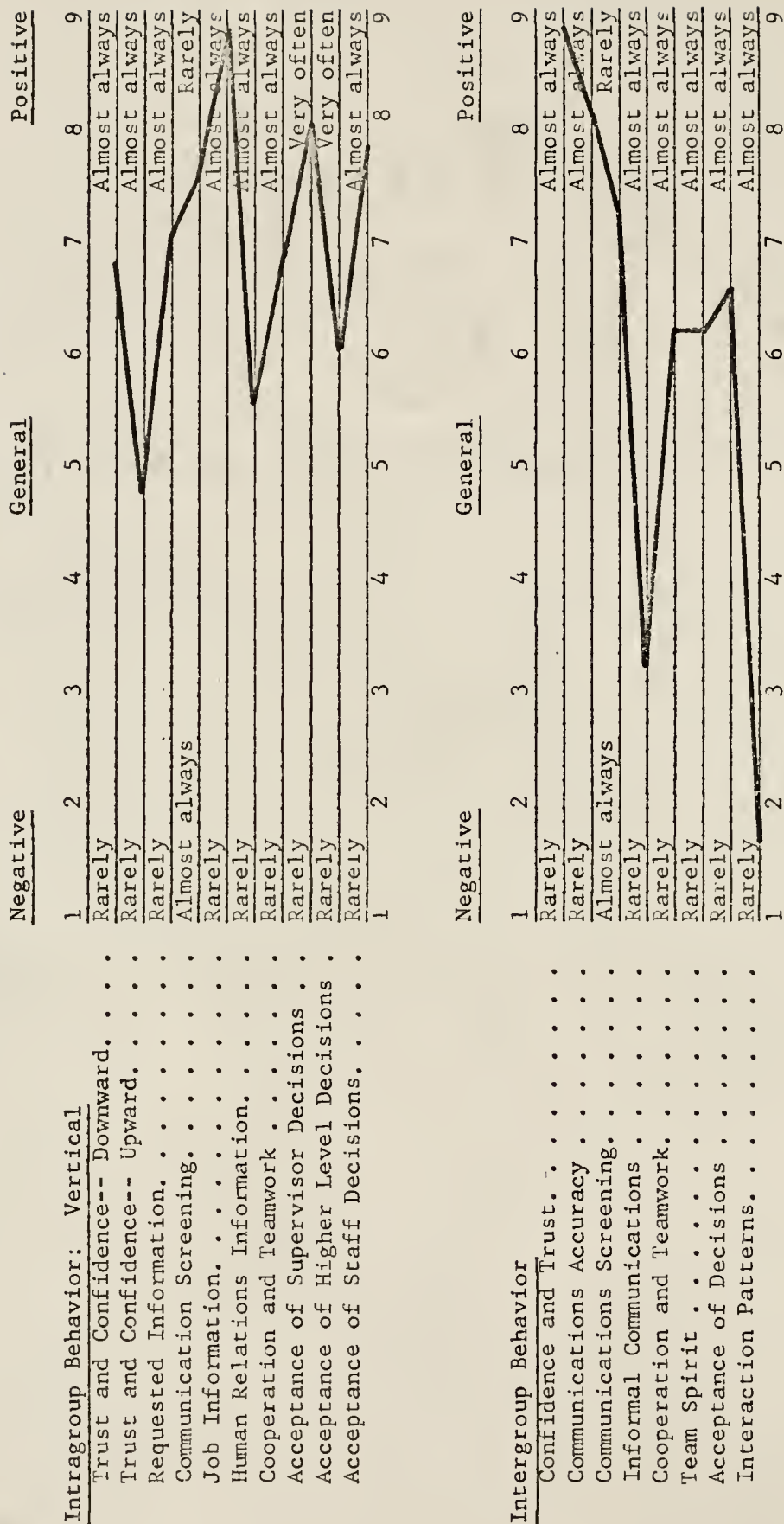


Fig. 37.---Continued

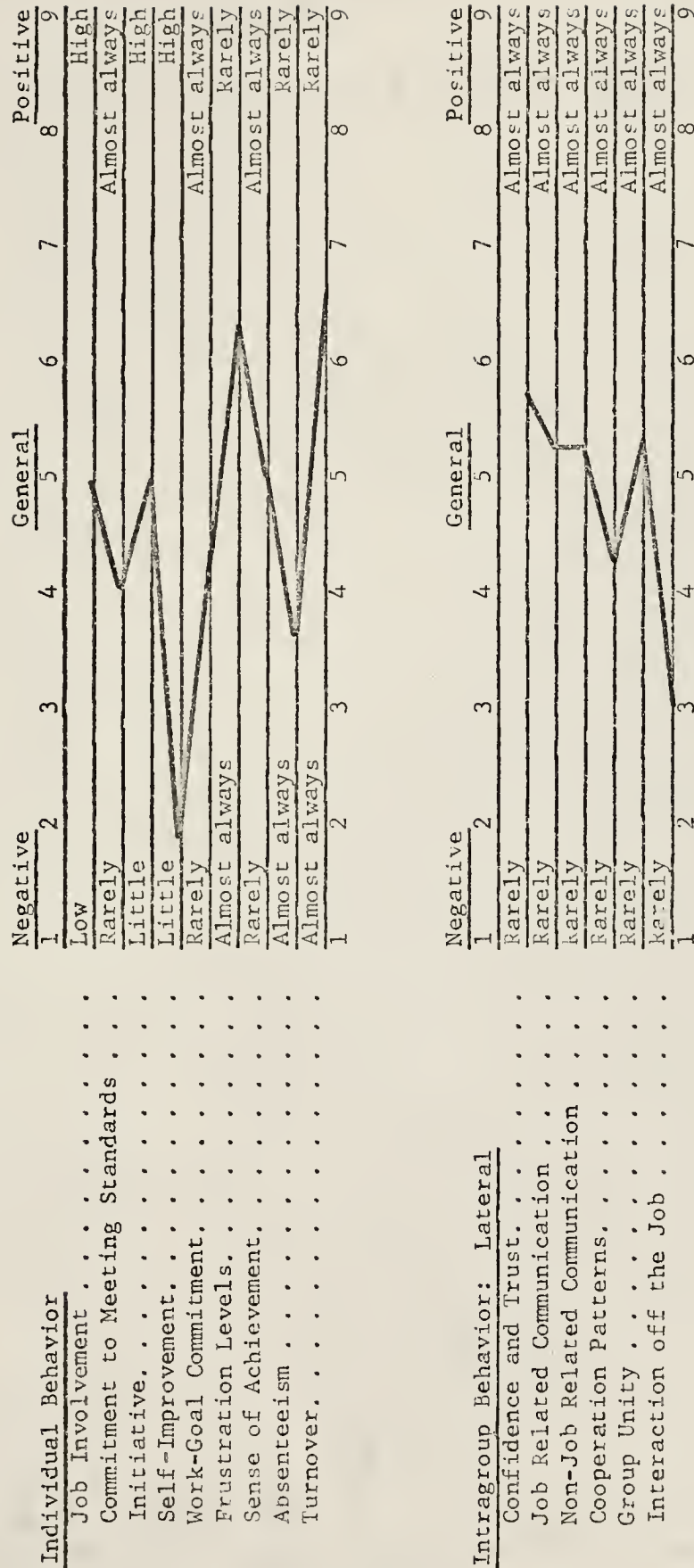


Fig. 38.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 7, Plant A.

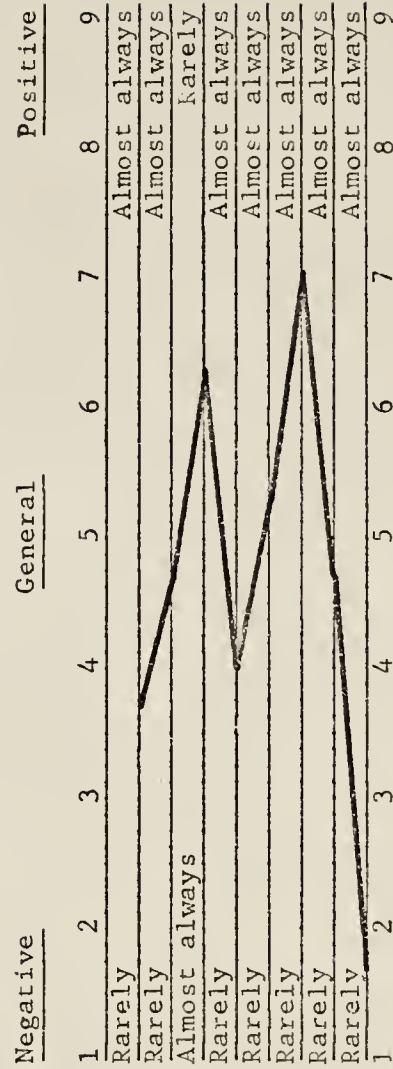
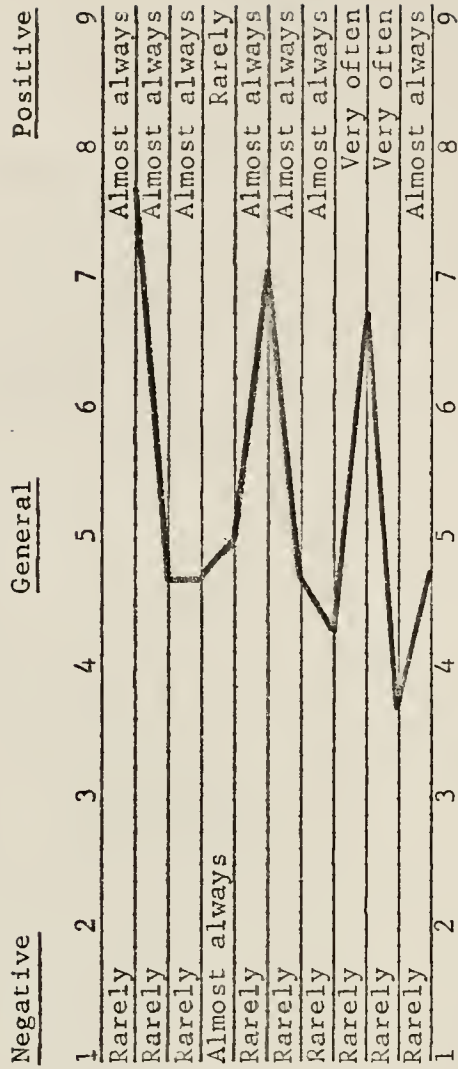


Fig. 38.---Continued

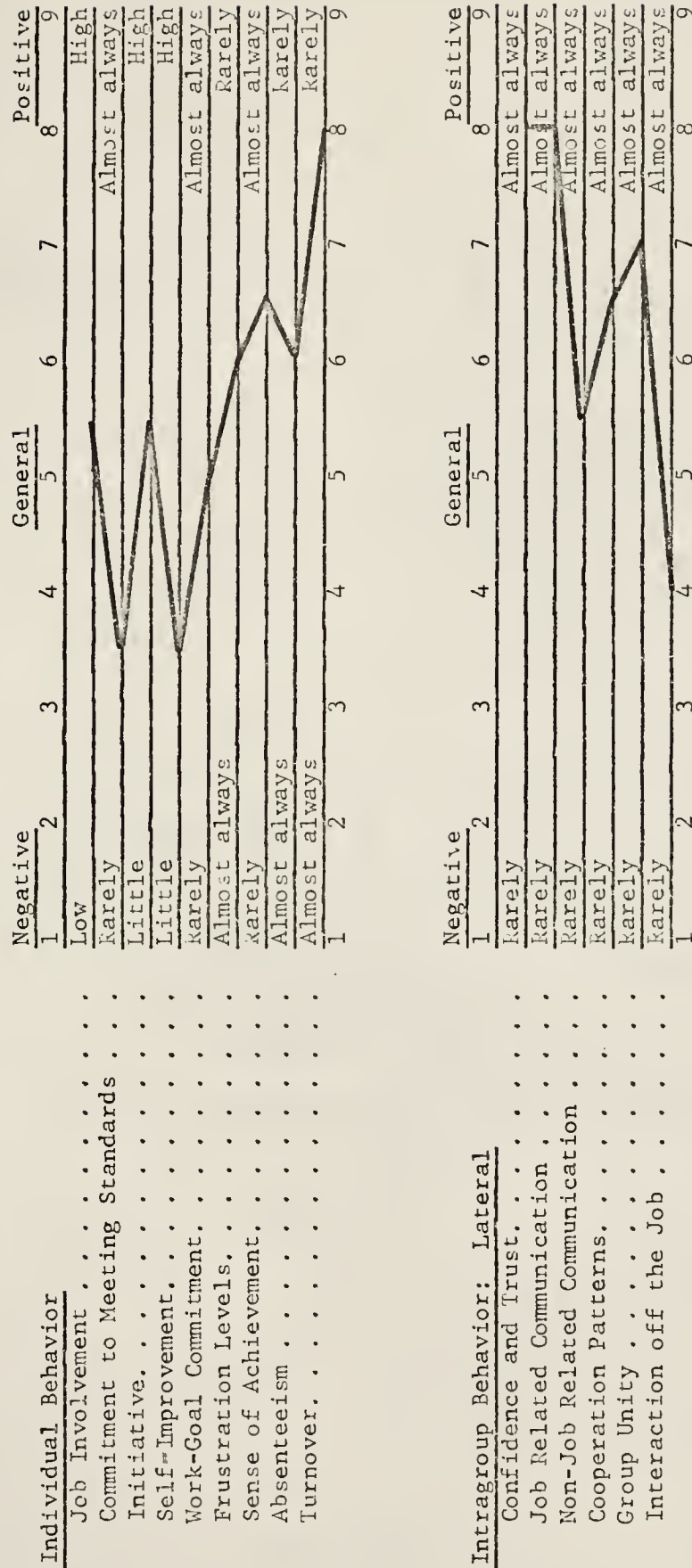


Fig. 39.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 8, Plant A.

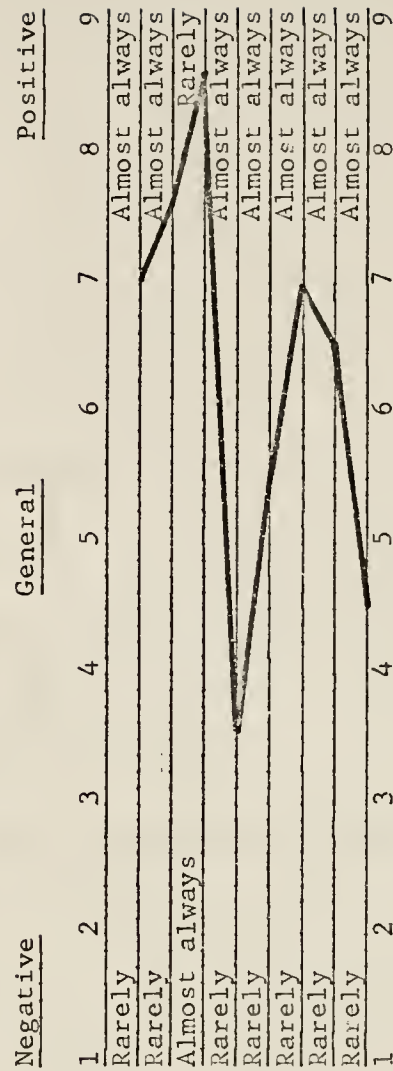
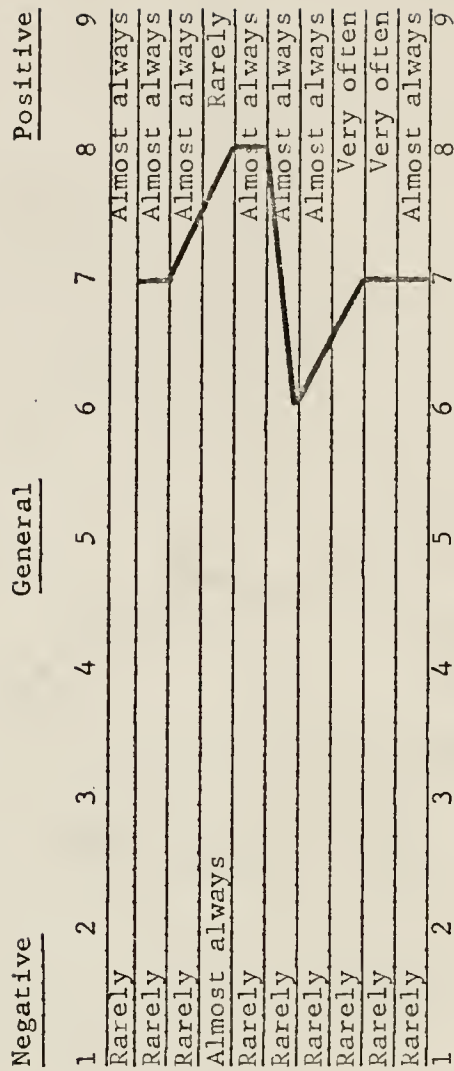


Fig. 39.--Continued

APPENDIX E

PRIMARY AND MEDIATING STRUCTURAL, LEADERSHIP,
AND BEHAVIORAL PROFILES OF PLANT B

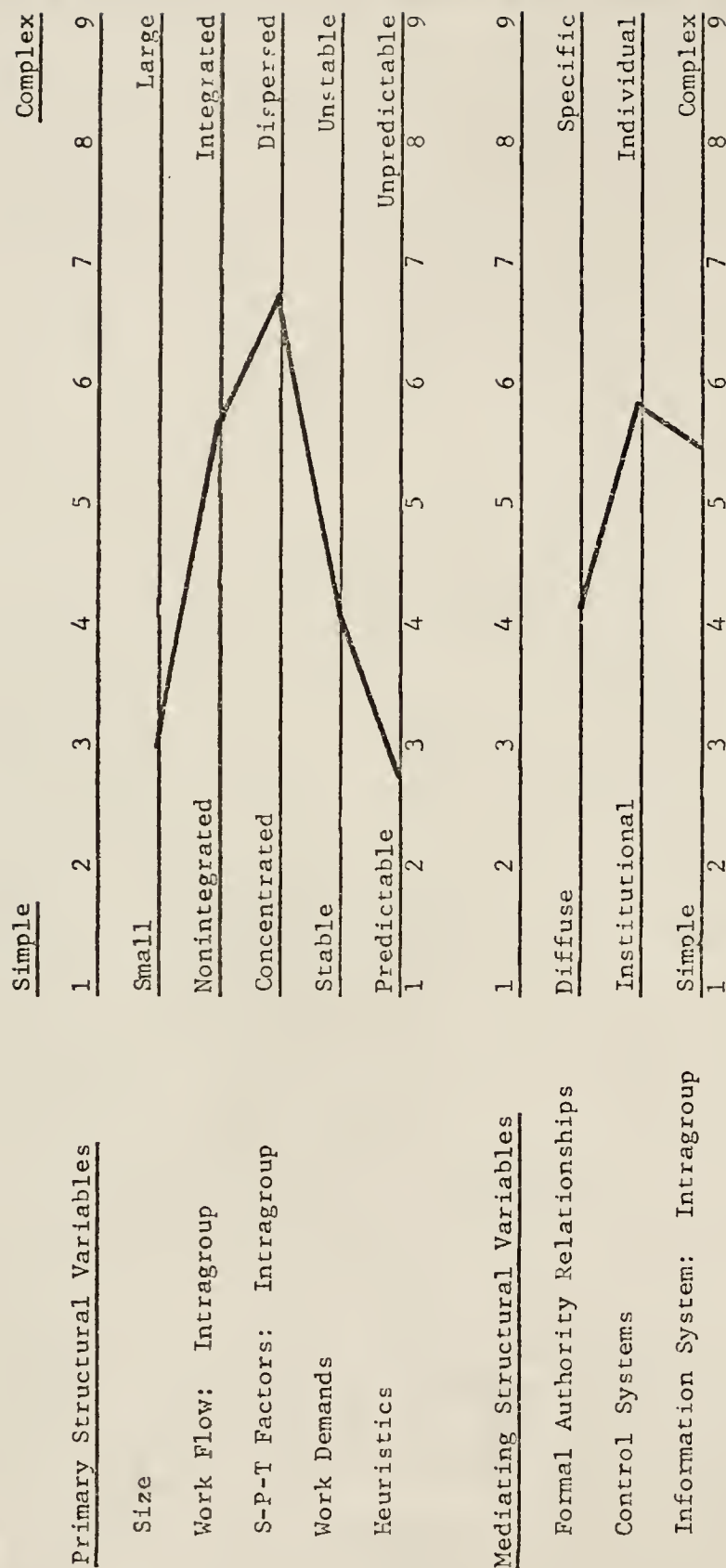


Fig. 40.--Primary and Mediating Structural Variable Profile, Work Group 1, Plant B.

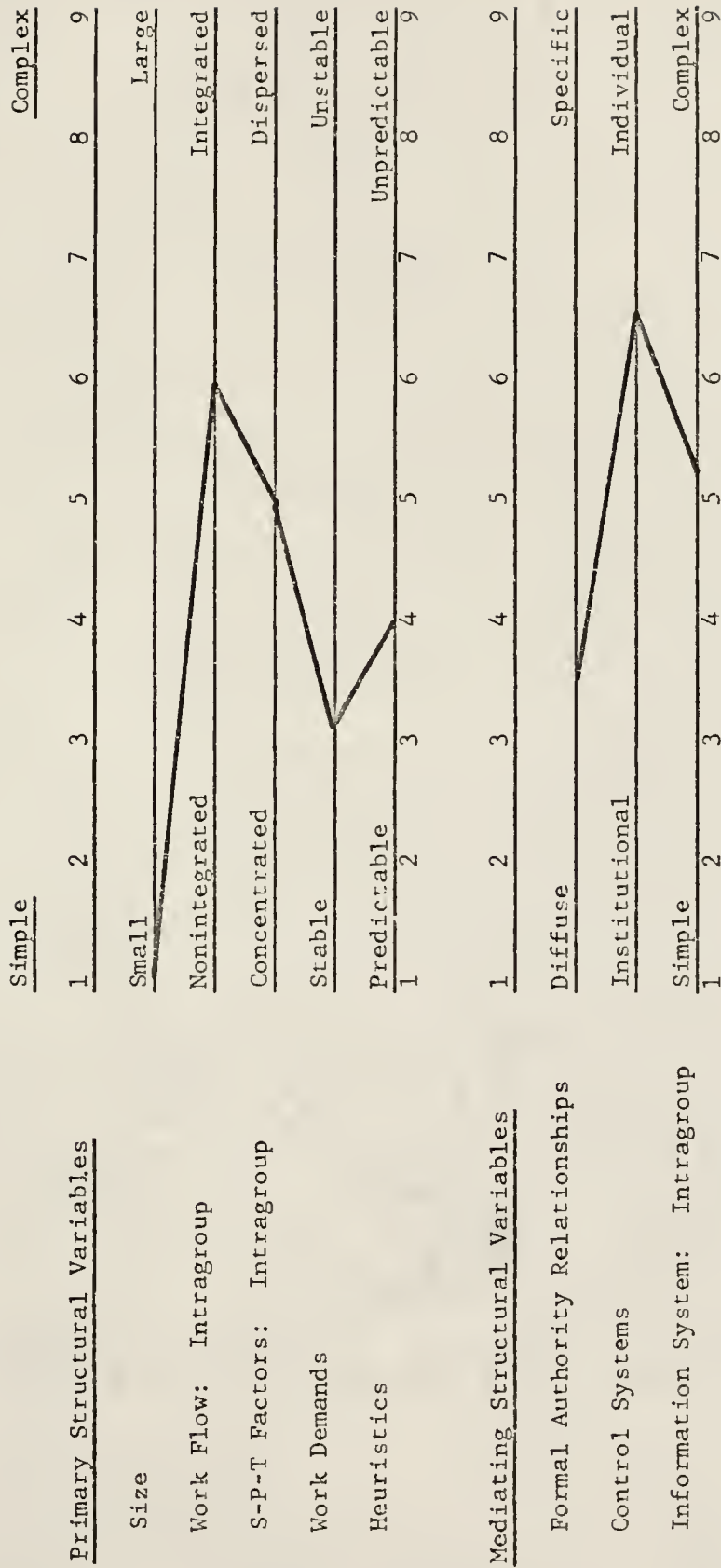


Fig. 41.--Primary and Mediating Structural Variable Profile, Work Group 2, Plant B.

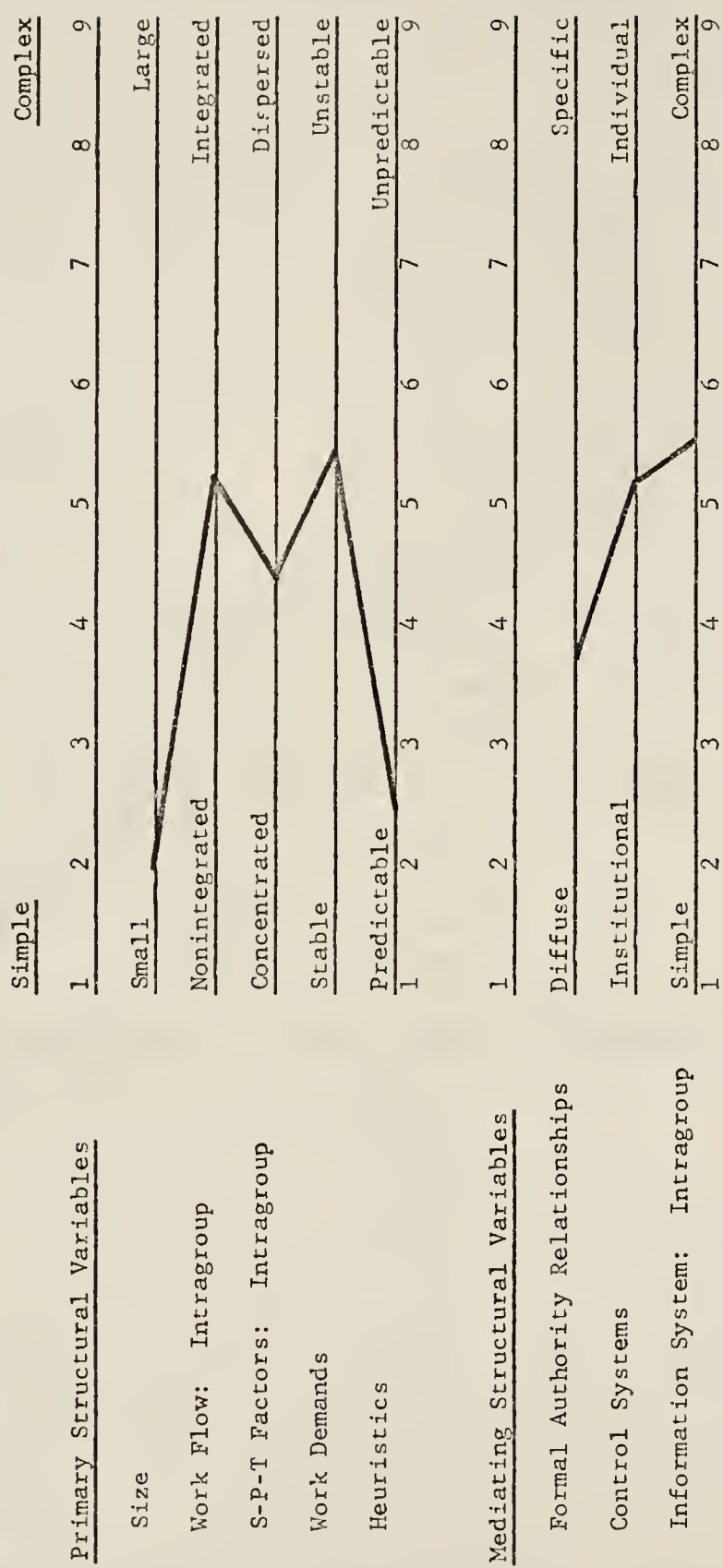


Fig. 42.--Primary and Mediating Structural Variable Profile, Work Group 3, Plant B.

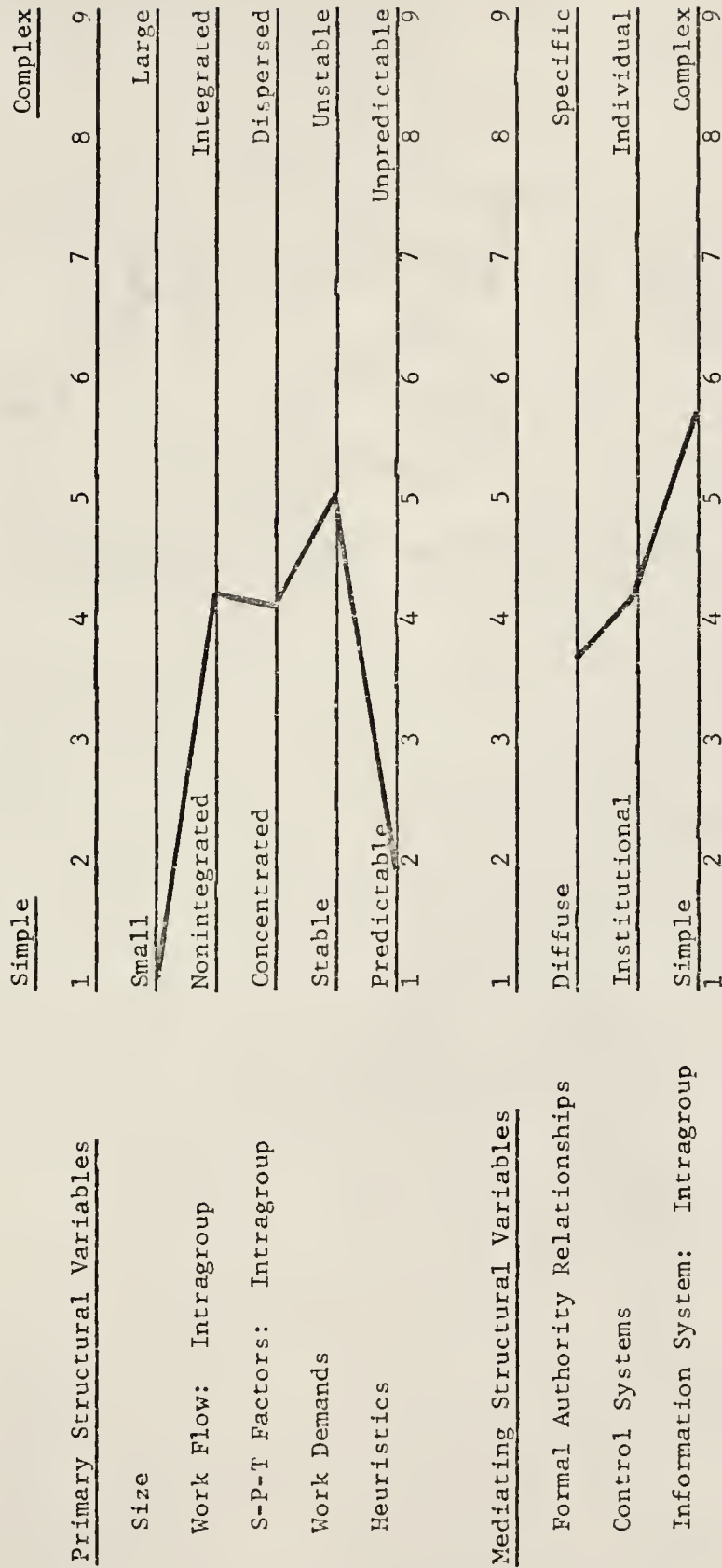


Fig. 43.--Primary and Mediating Structural Variable Profile, Work Group 4, Plant B.

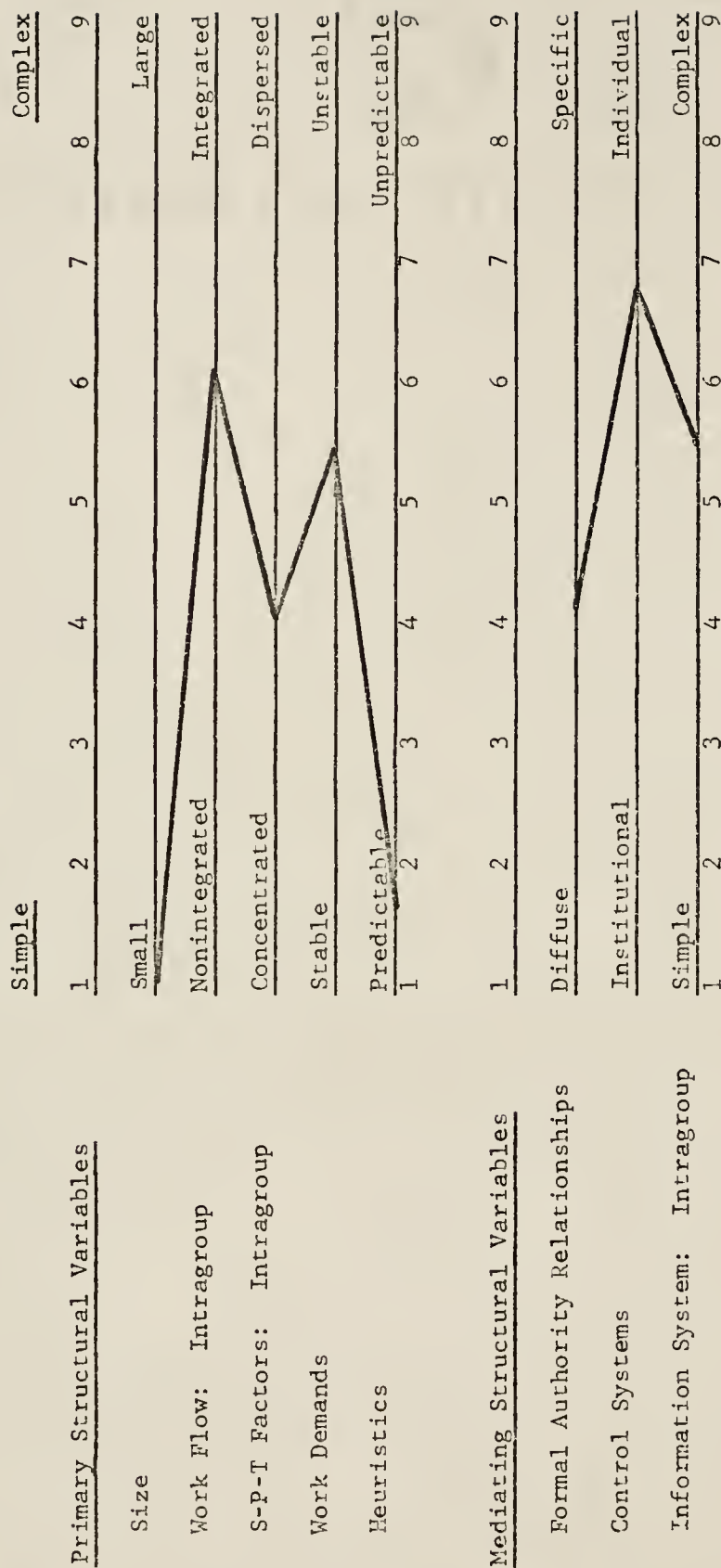


Fig. 44.--Primary and Mediating Structural Variable Profile, Work Group 5, Plant B.

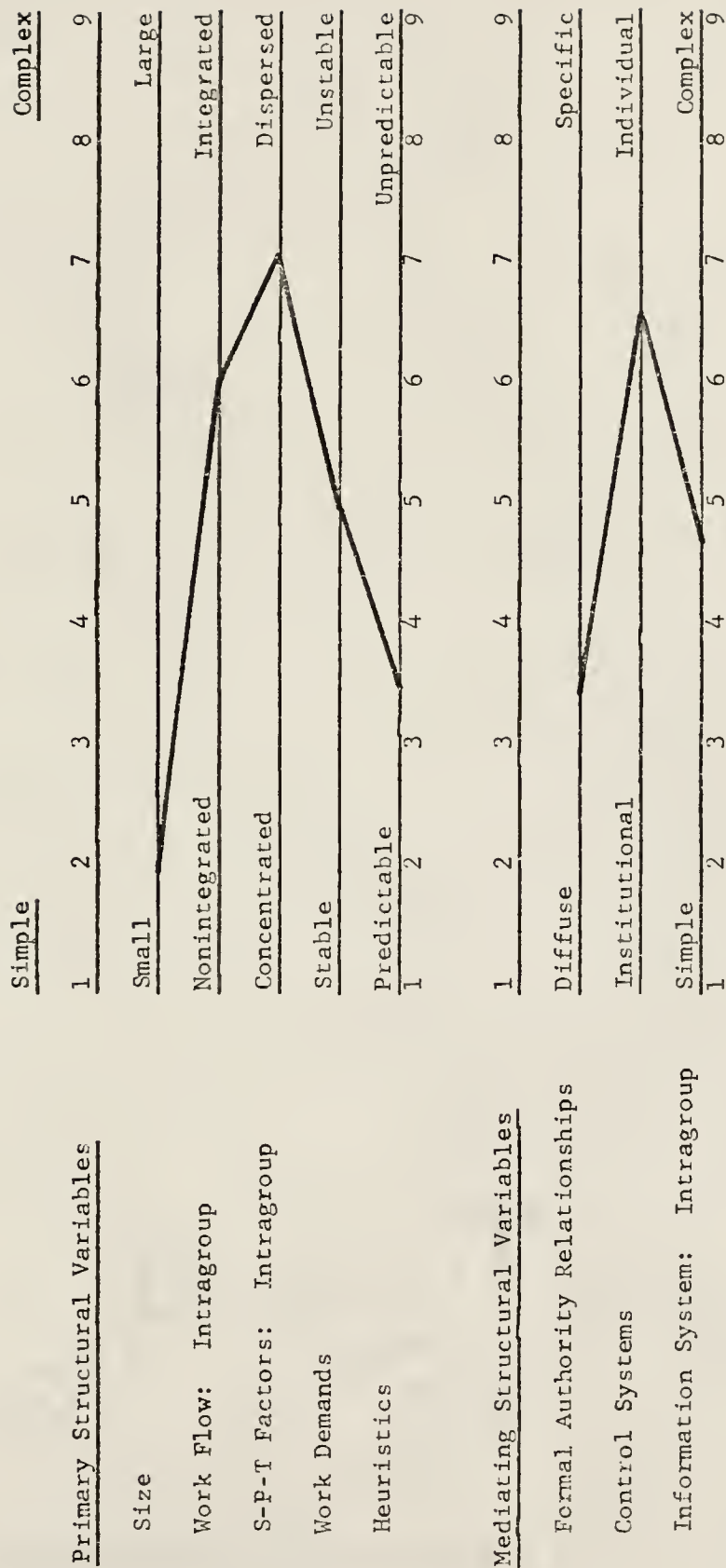


Fig. 45.--Primary and Mediating Structural Variable Profile, Work Group 6, Plant B.

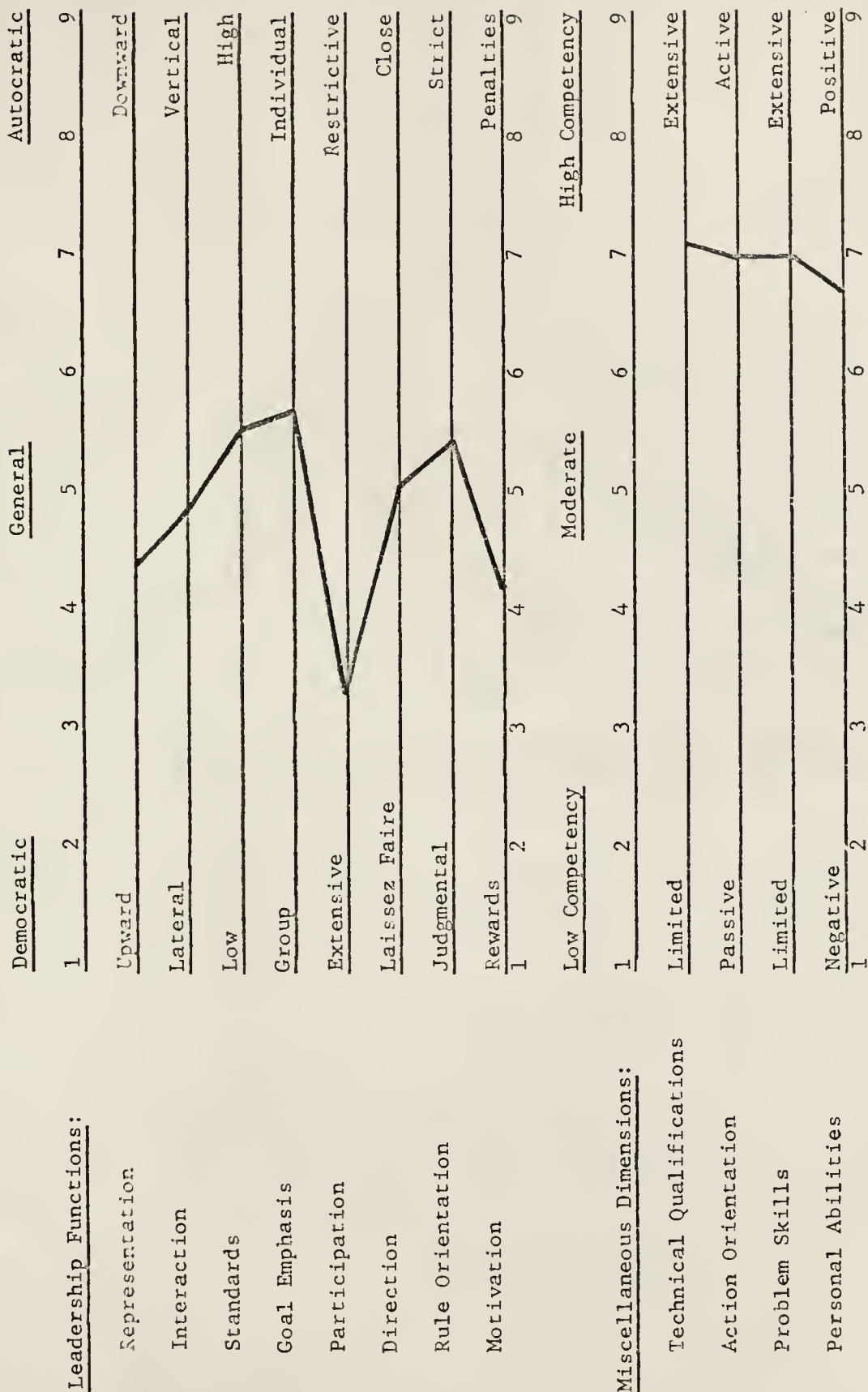


Fig. 47.--Second Level Supervisor's Leadership Profile, Work Group 1, Plant B.

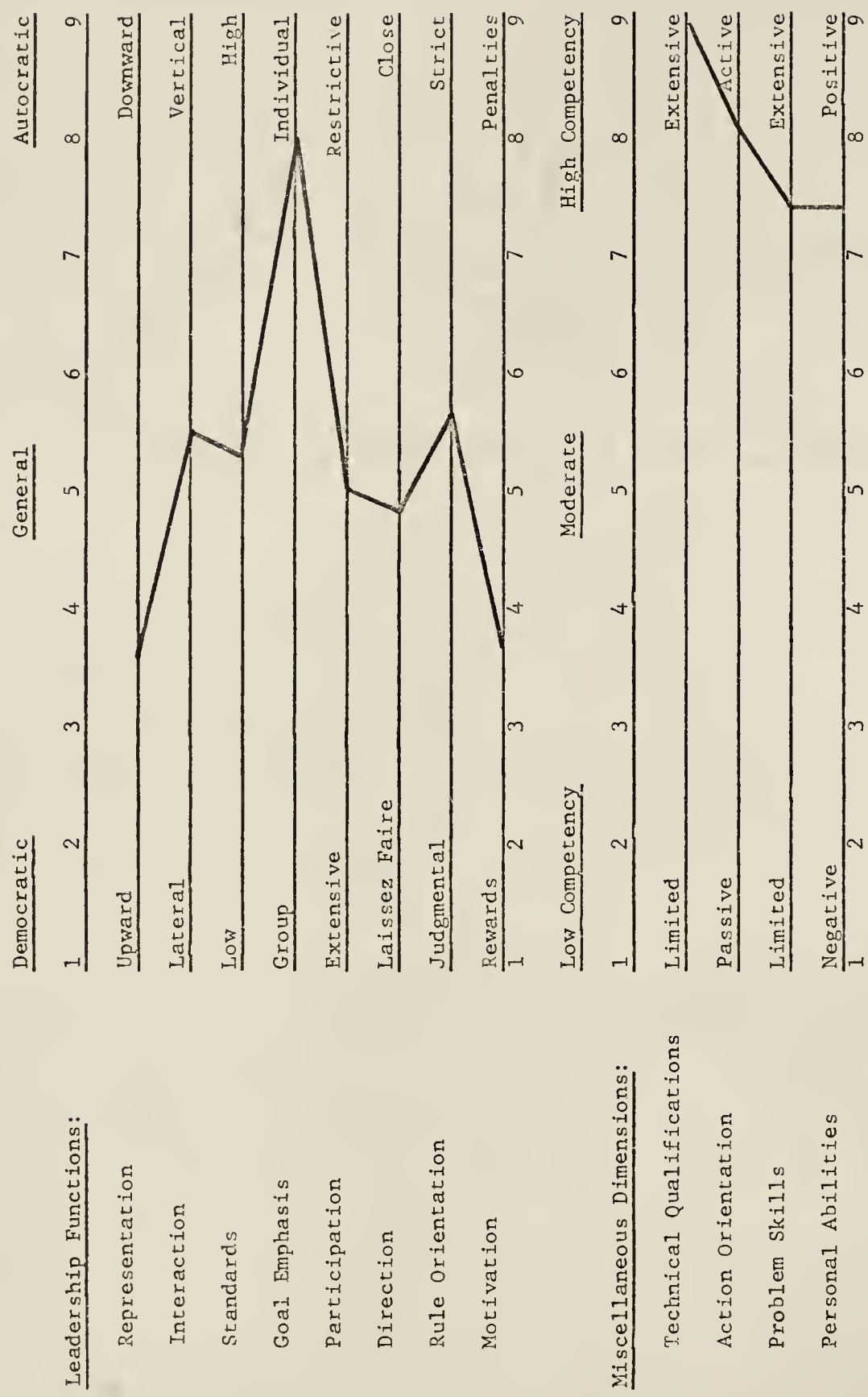


Fig. 48.--Second Level Supervisor's Leadership Profile, Work Group 2, Plant B.

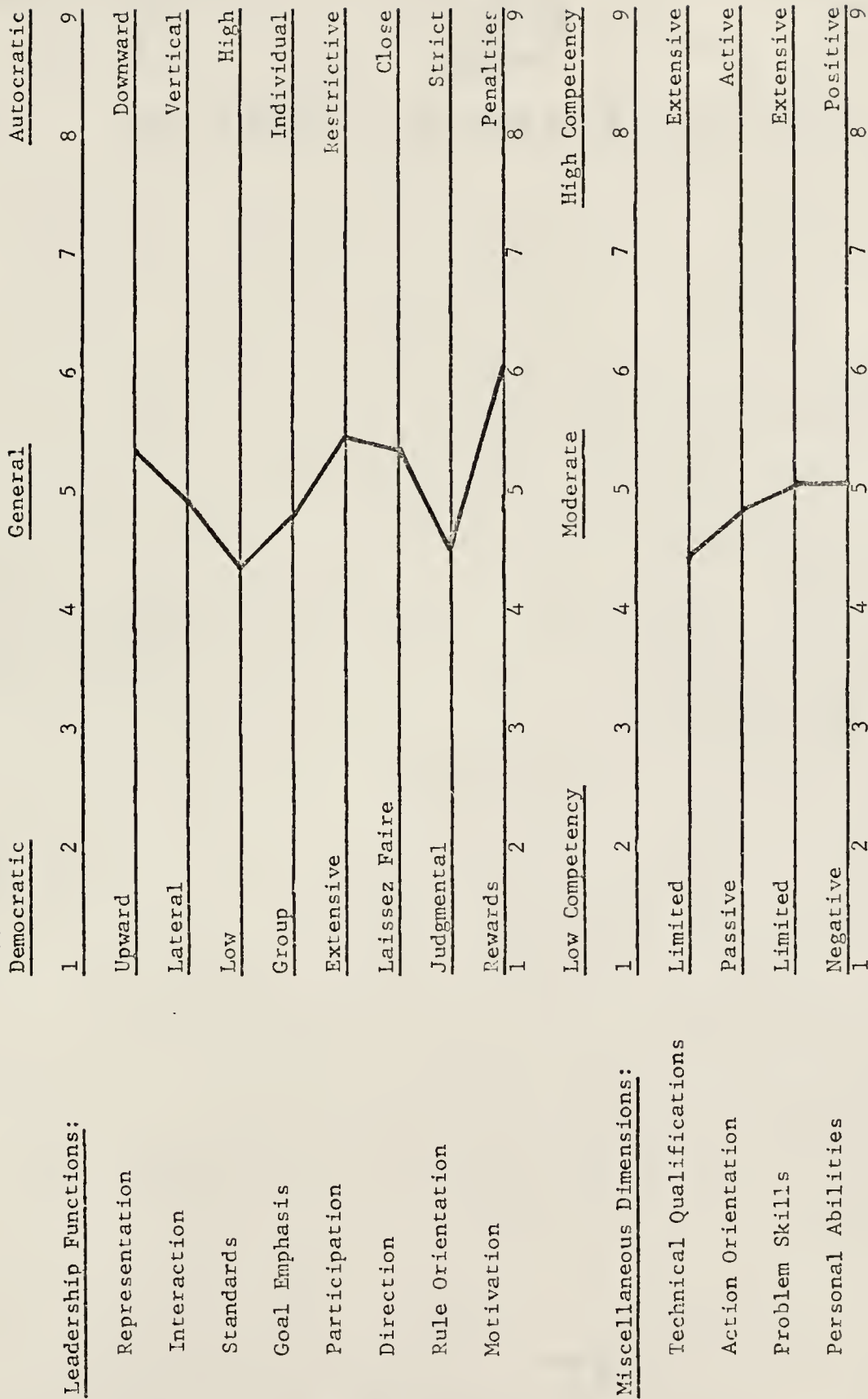


Fig. 49.--Second Level Supervisor's Leadership Profile, Work Group 3, Plant B.

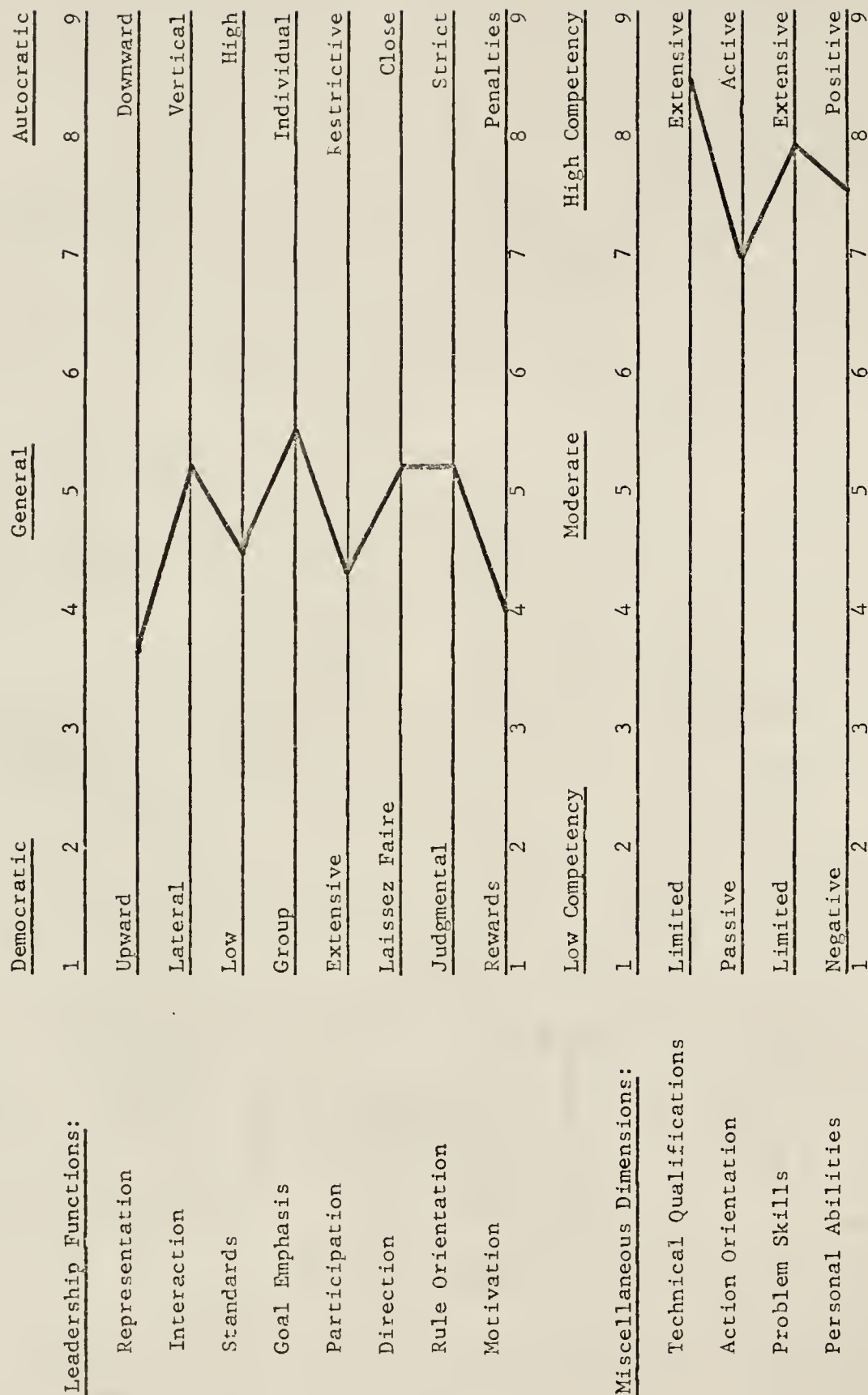


Fig. 50.--Second Level Supervisor's Leadership Profile, Work Group 4, Plant B.



Fig. 51.--Second Level Supervisor's Leadership Profile, Work Group 5, Plant B.

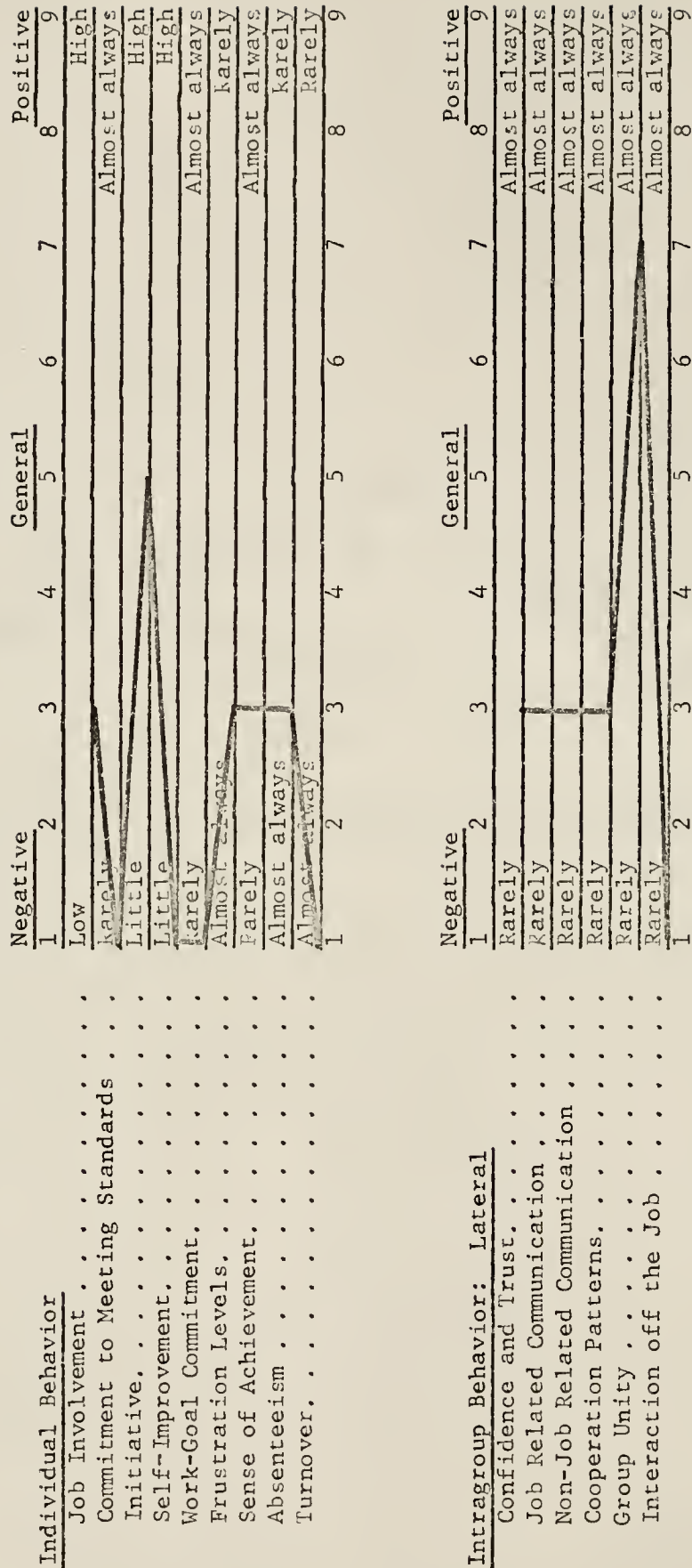


Fig. 52.--Behavioral Profile of Employees, Supervisor Response, Work Group 1, Plant B.

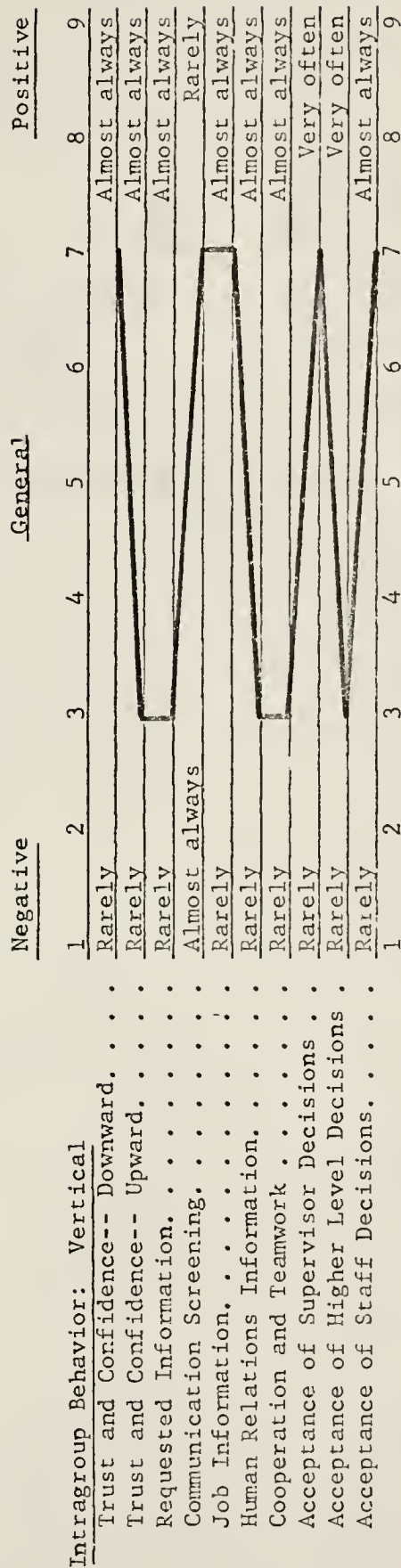


Fig. 52.--Continued

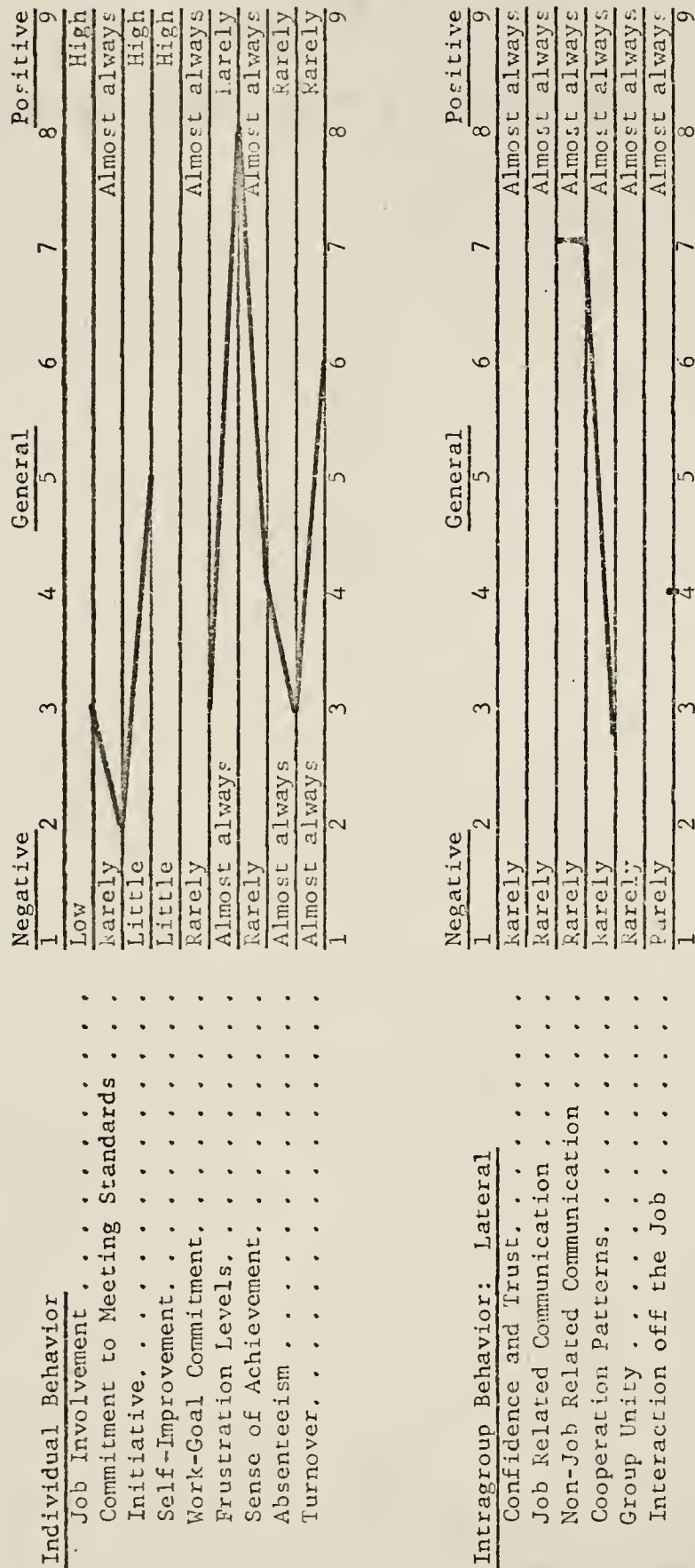


Fig. 53.--Behavioral Profile of Employees, Supervisor Response, Work Group 2, Plant B.

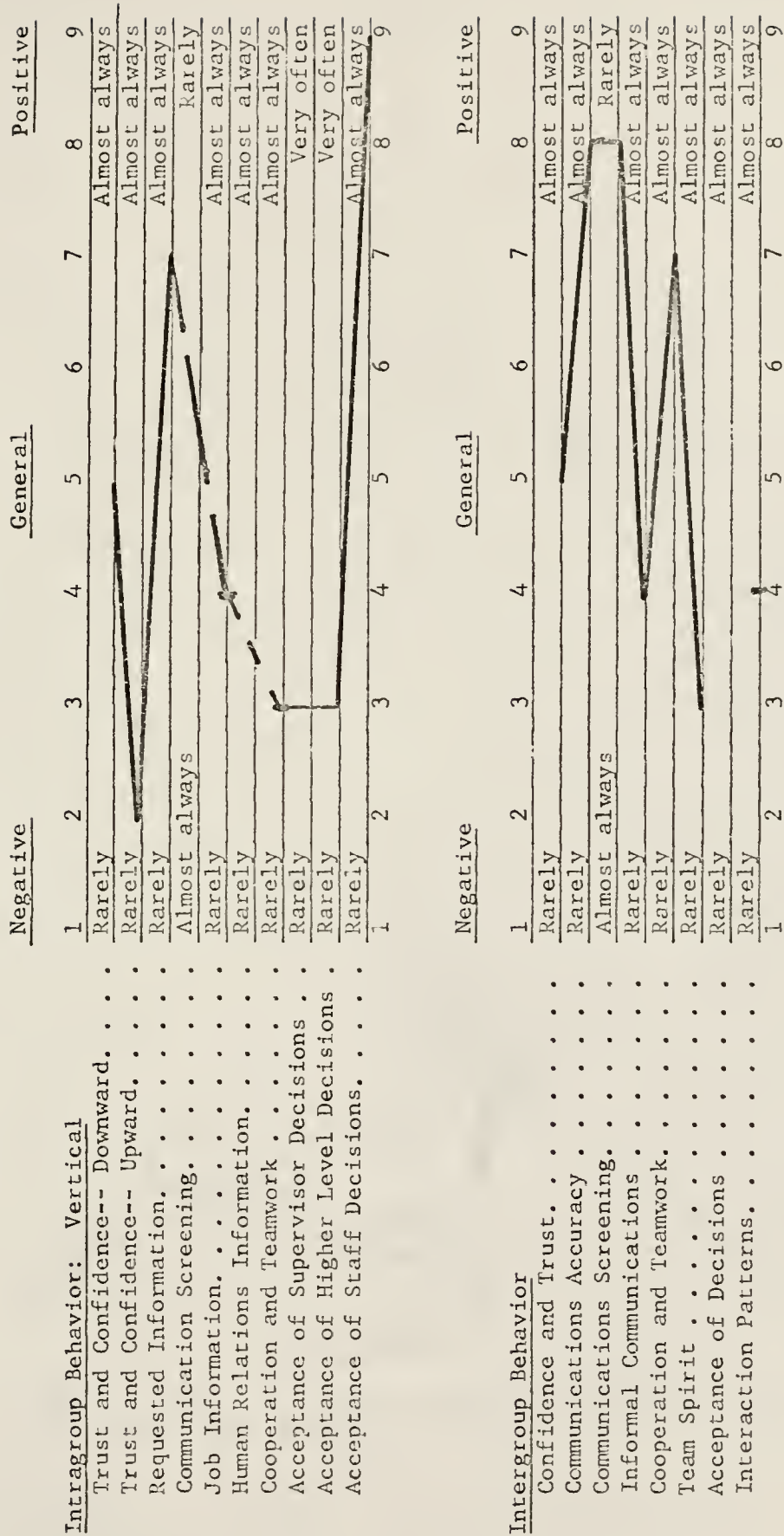


Fig. 53.--Continued

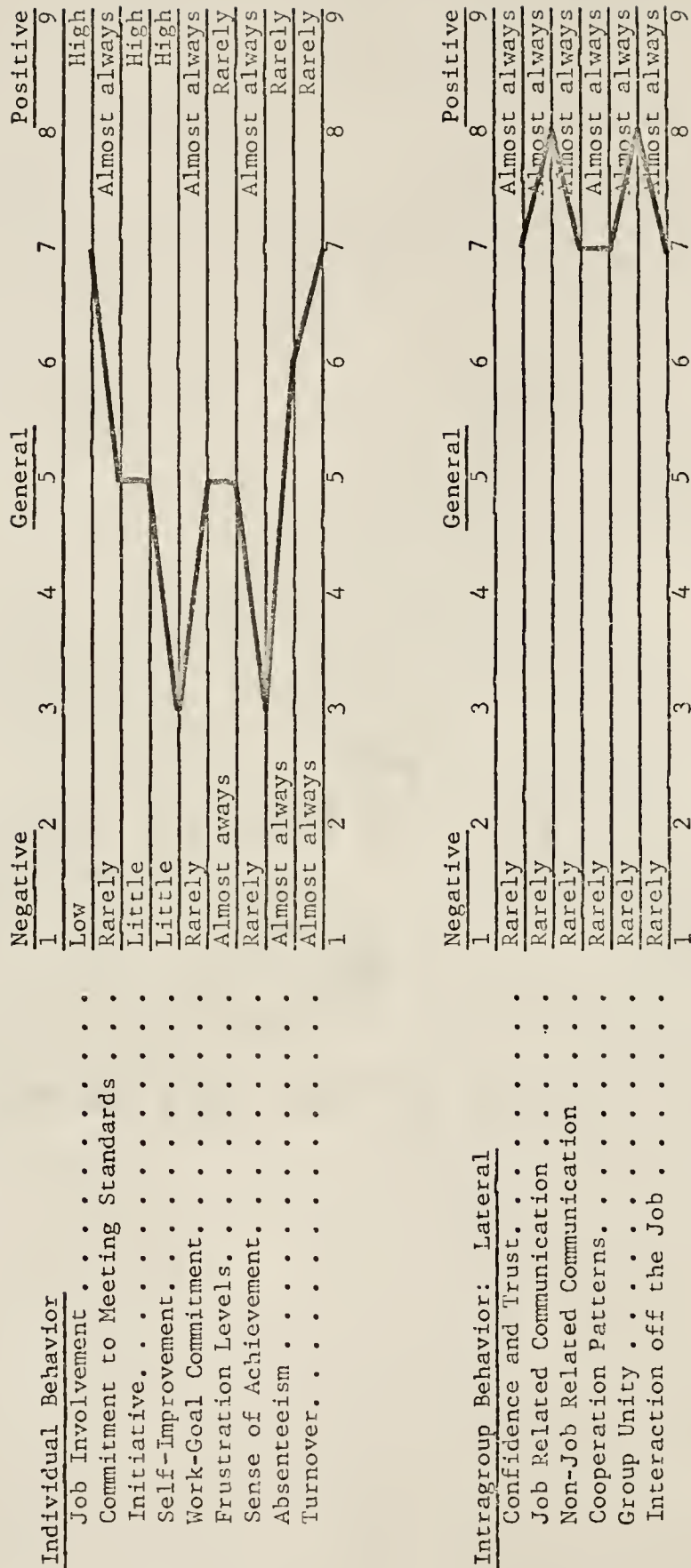


Fig. 54.--Behavioral Profile of Employees, Supervisor Response, Work Group 3, Plant B.

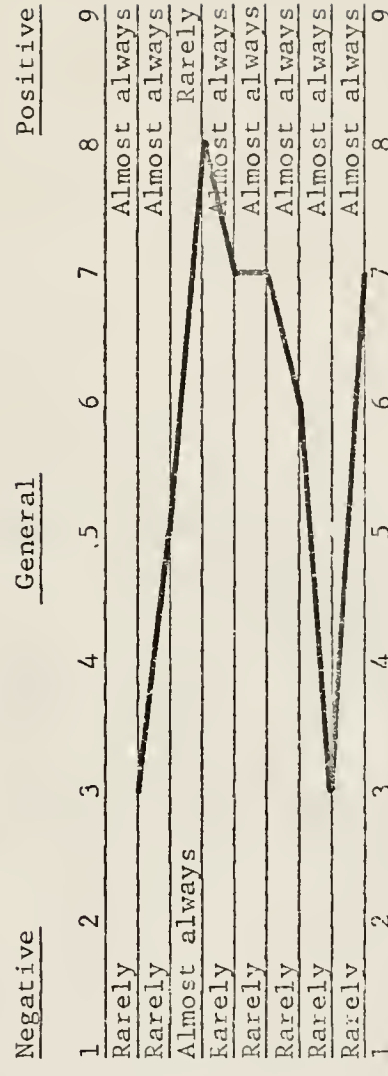
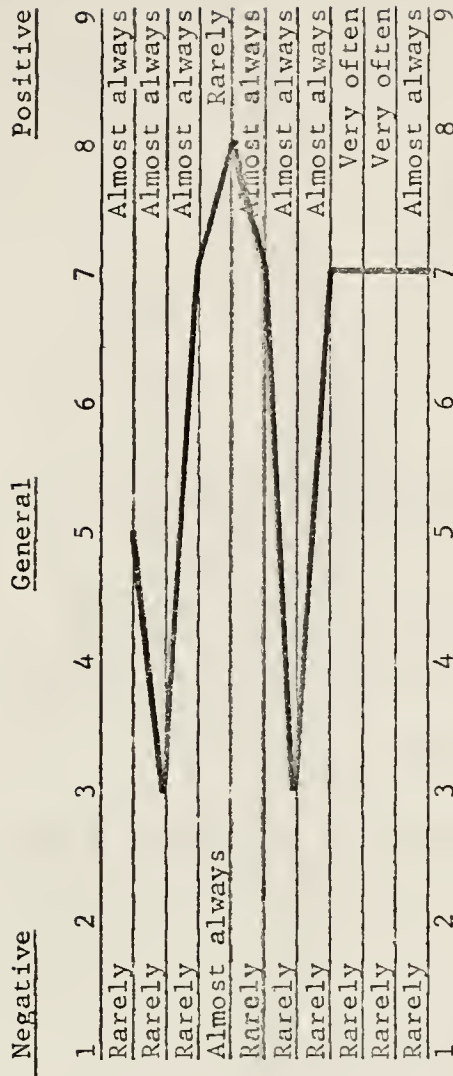


Fig. 54.--Continued

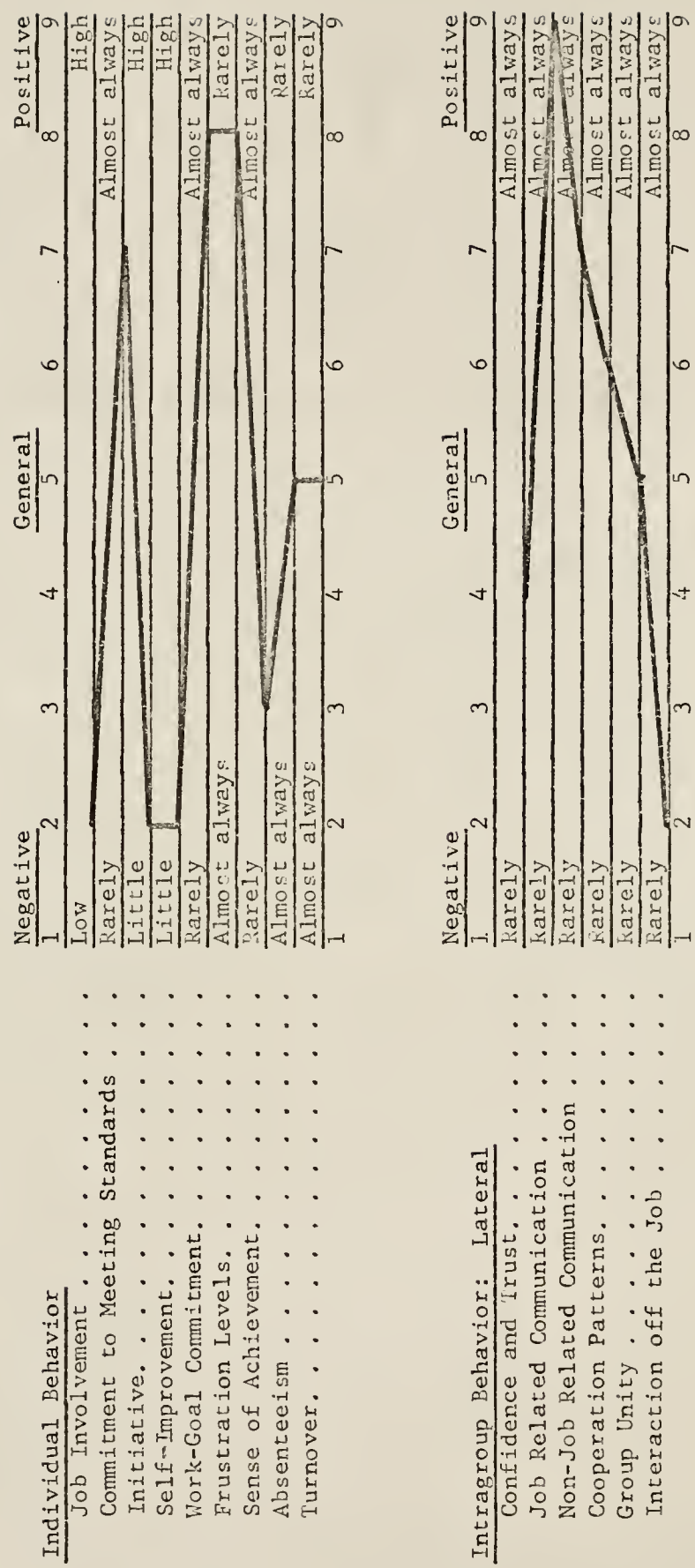


Fig. 55.--Behavioral Profile of Employees, Supervisor Response, Work Group 4, Plant B.

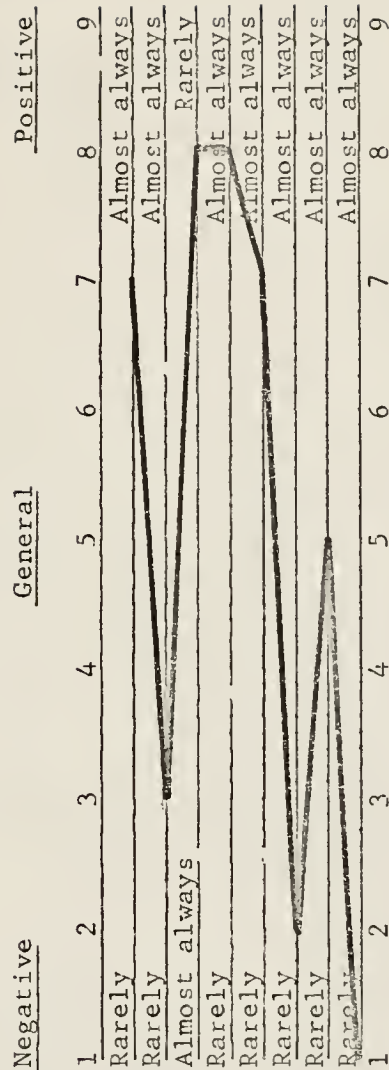
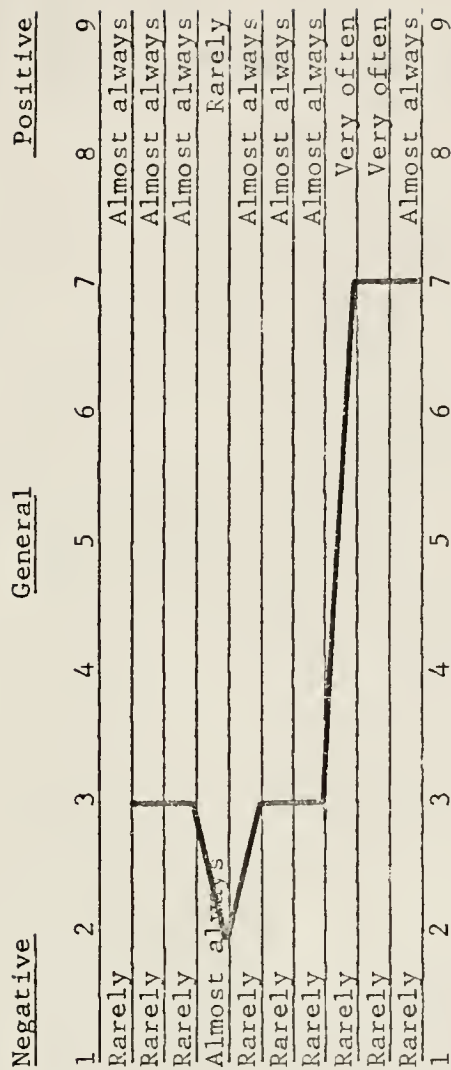


Fig. 55.--Continued

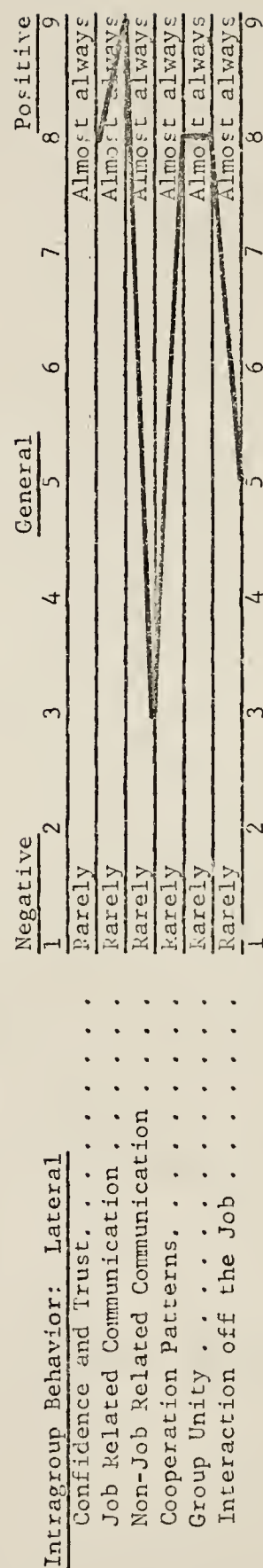
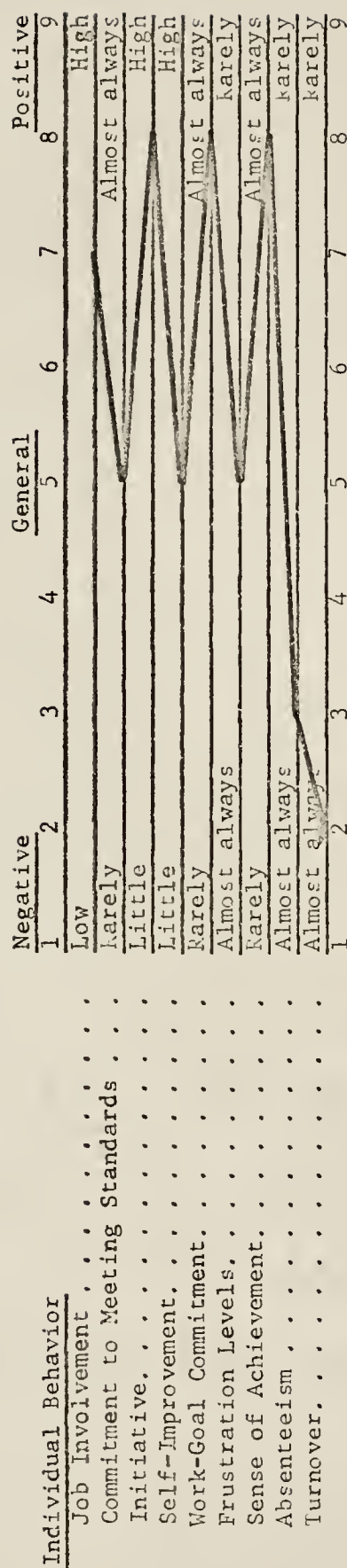
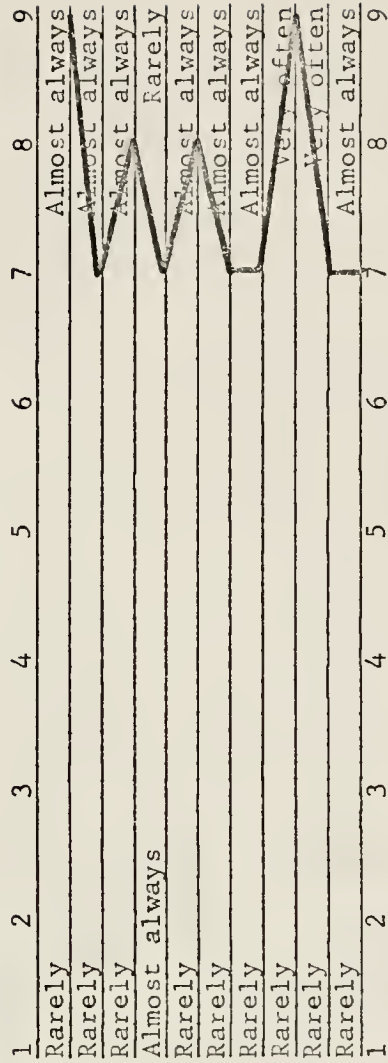


Fig. 56.--Behavioral Profile of Employees, Supervisor Response, Work Group 5, Plant B.

NegativeGeneralPositiveIntragroup Behavior: Vertical

Trust and Confidence-- Downward. . . .
 Trust and Confidence-- Upward. . . .
 Requested Information.
 Communication Screening.
 Job Information.
 Human Relations Information.
 Cooperation and Teamwork
 Acceptance of Supervisor Decisions
 Acceptance of Higher Level Decisions
 Acceptance of Staff Decisions.

NegativeGeneralPositiveIntergroup Behavior

Confidence and Trust.
 Communications Accuracy
 Communications Screening.
 Informal Communications
 Cooperation and Teamwork.
 Team Spirit
 Acceptance of Decisions
 Interaction Patterns.

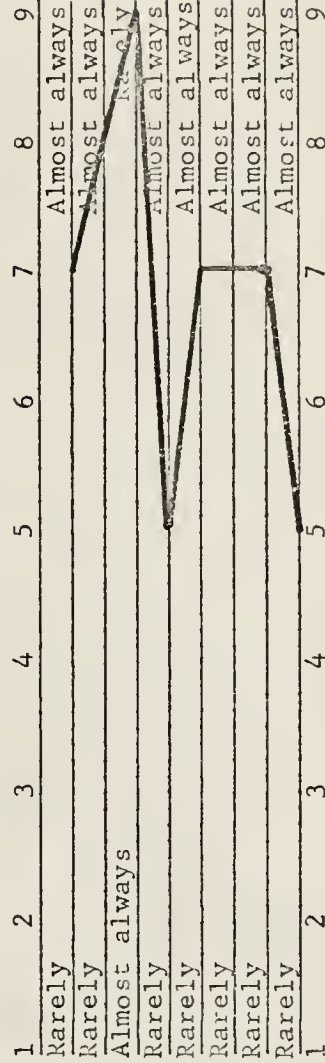


Fig. 56.--Continued

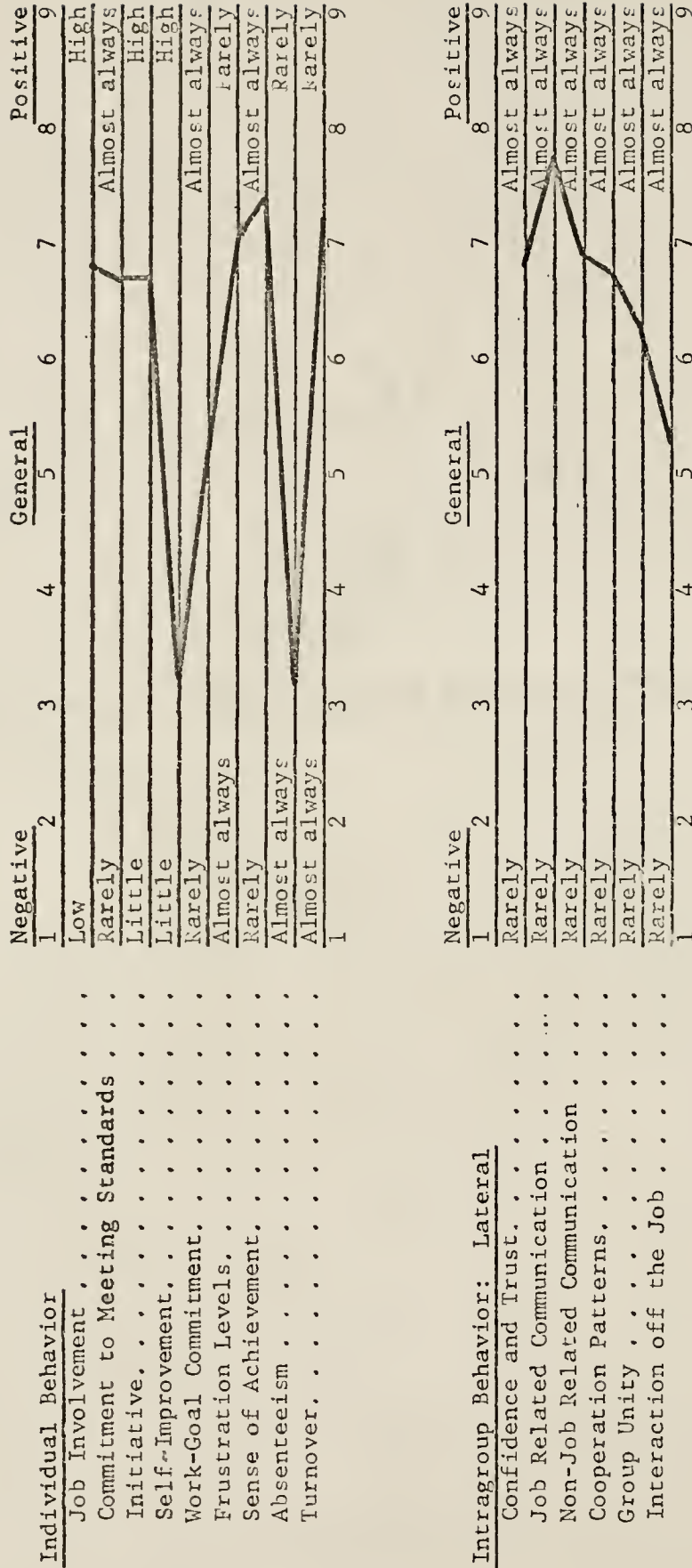


Fig. 57.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 1, Plant B.

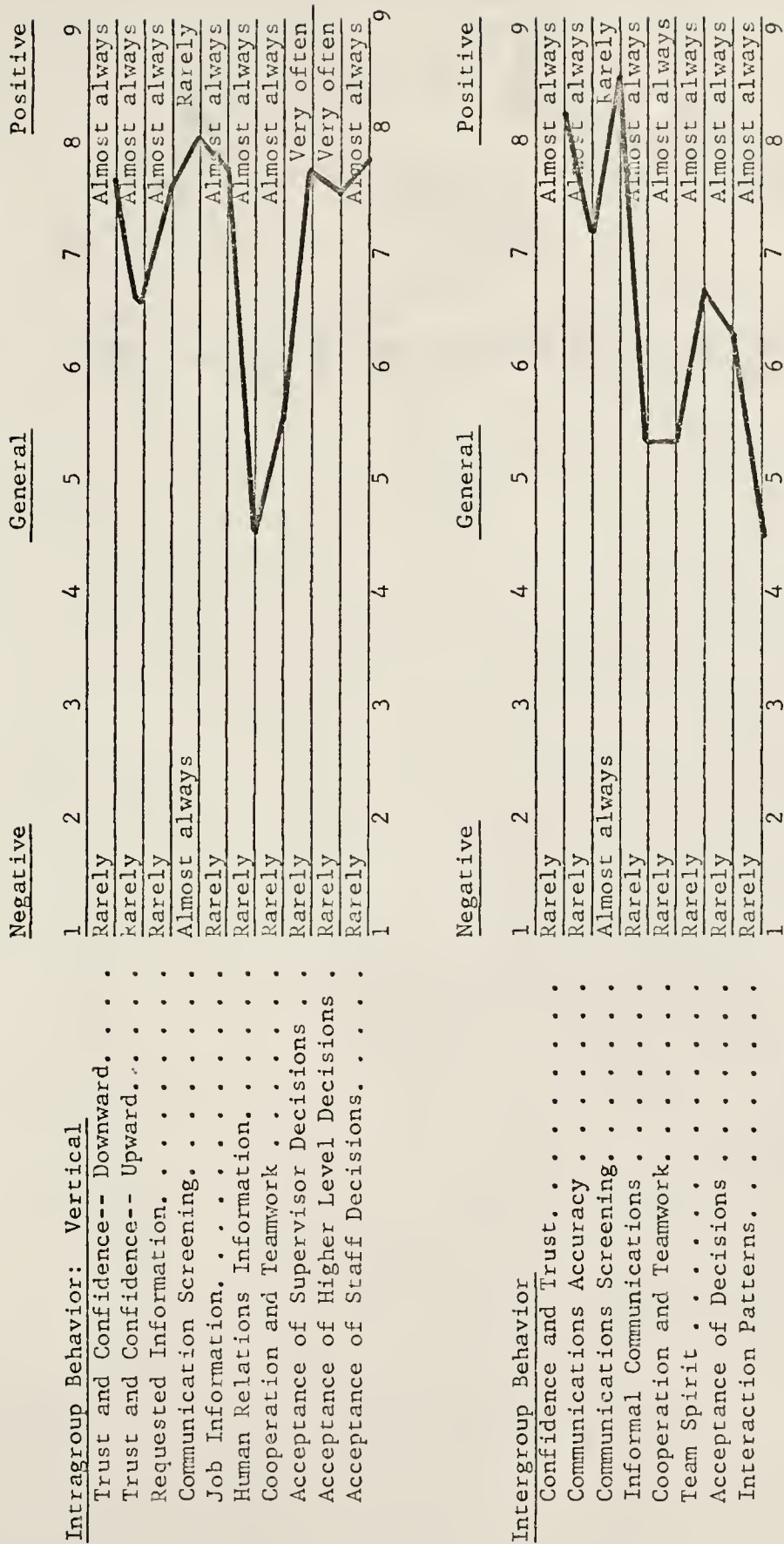


Fig. 57.--Continued

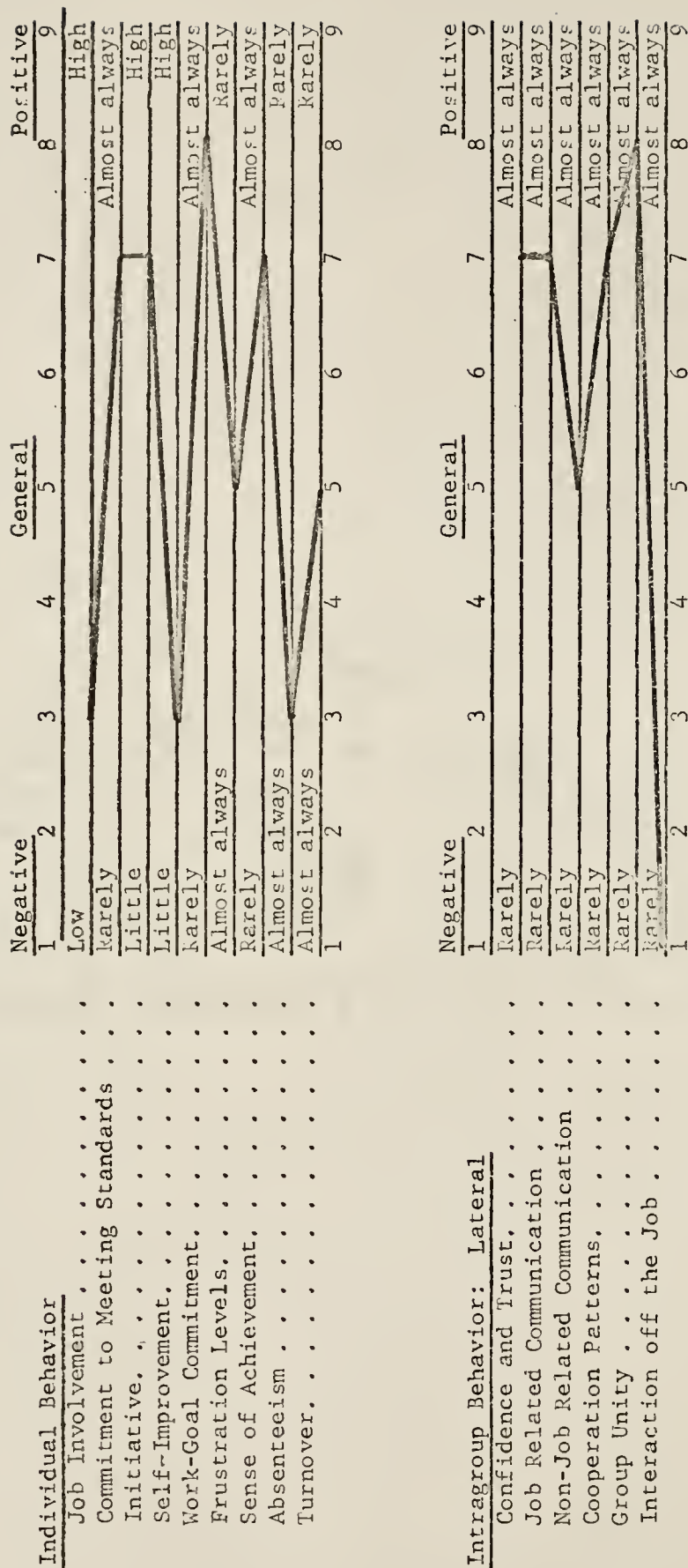


Fig. 58.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 2, Plant B.

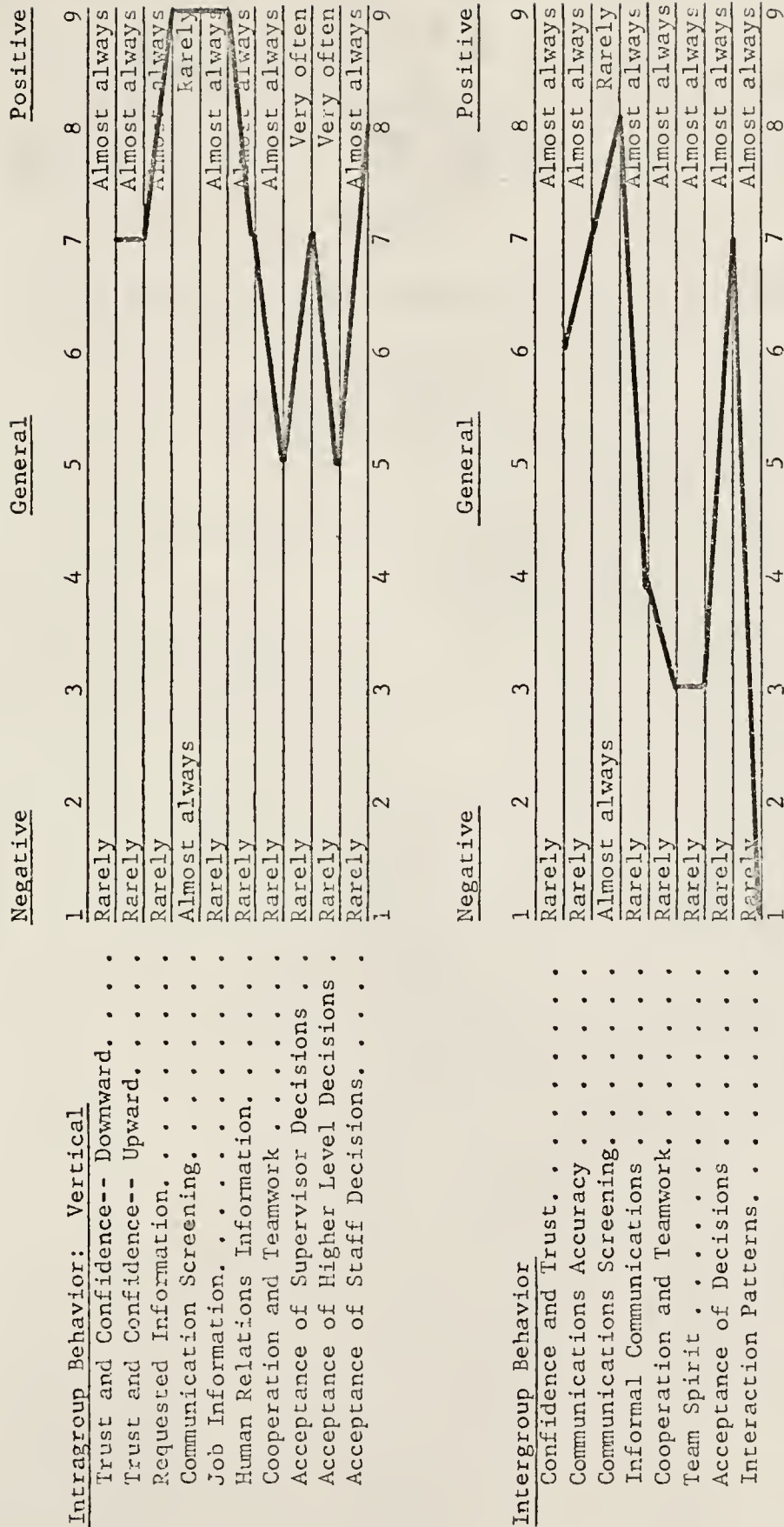


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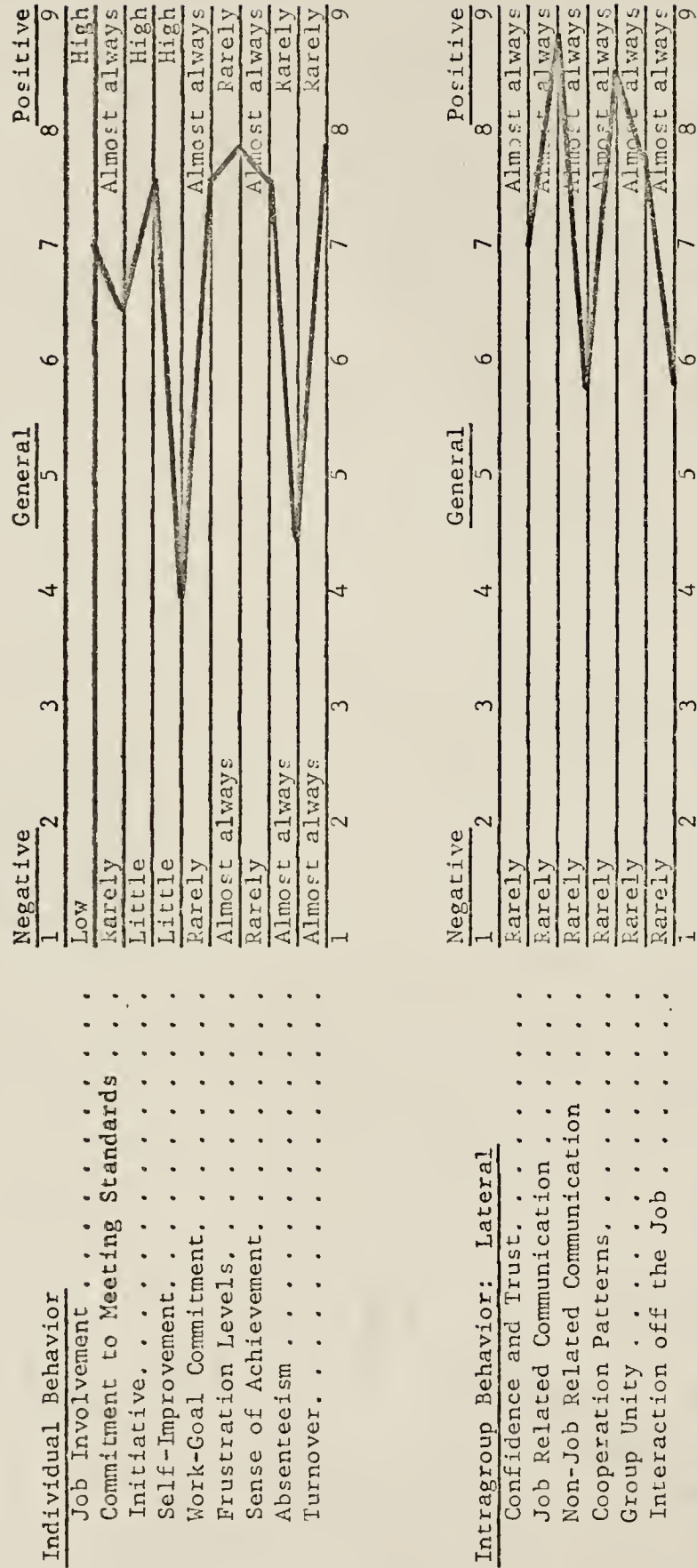


Fig. 59.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 3, Plant B.

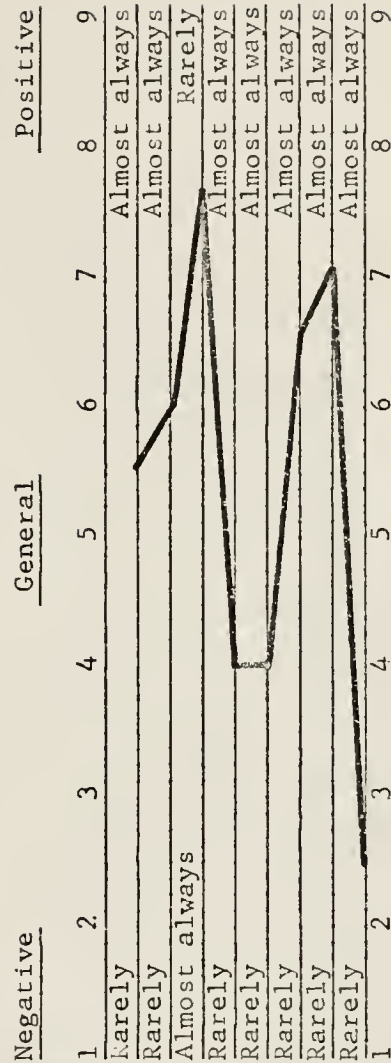
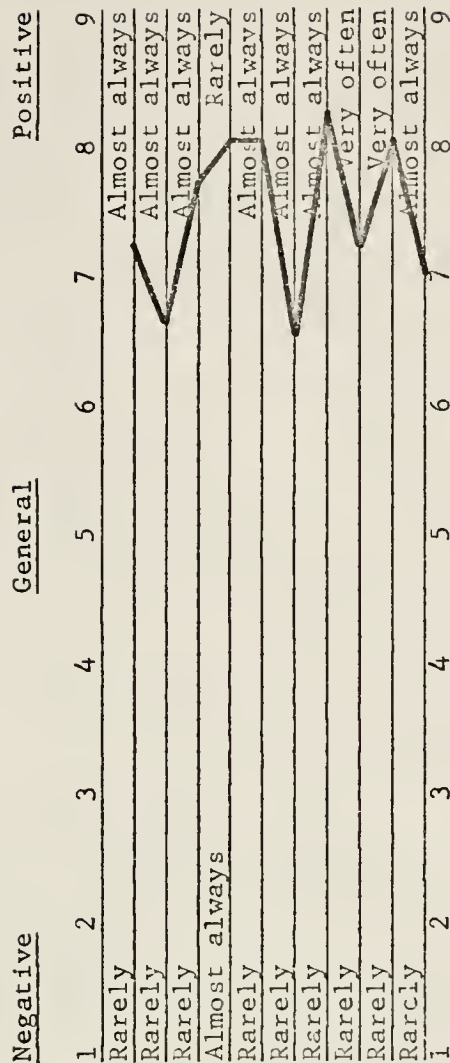


Fig. 59.--Continued

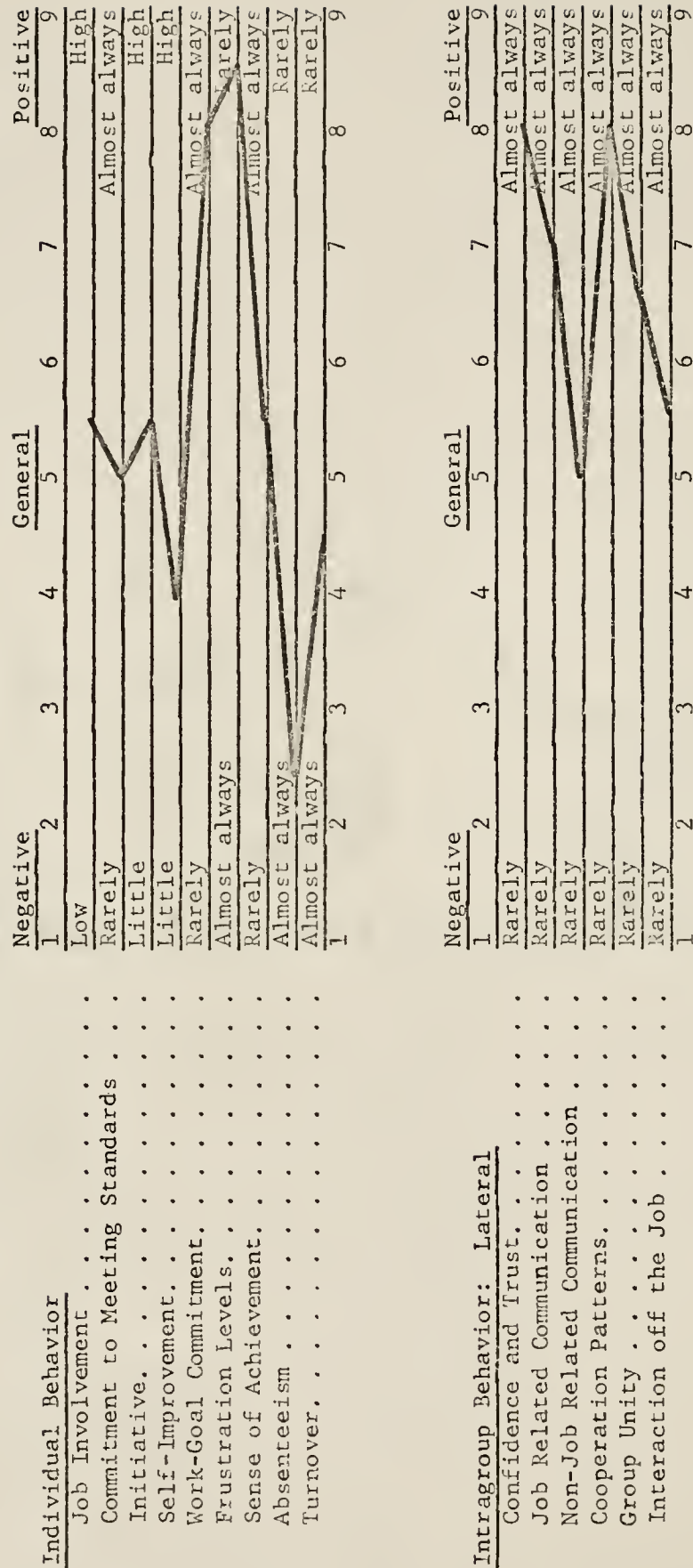


Fig. 60.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 4, Plant B.

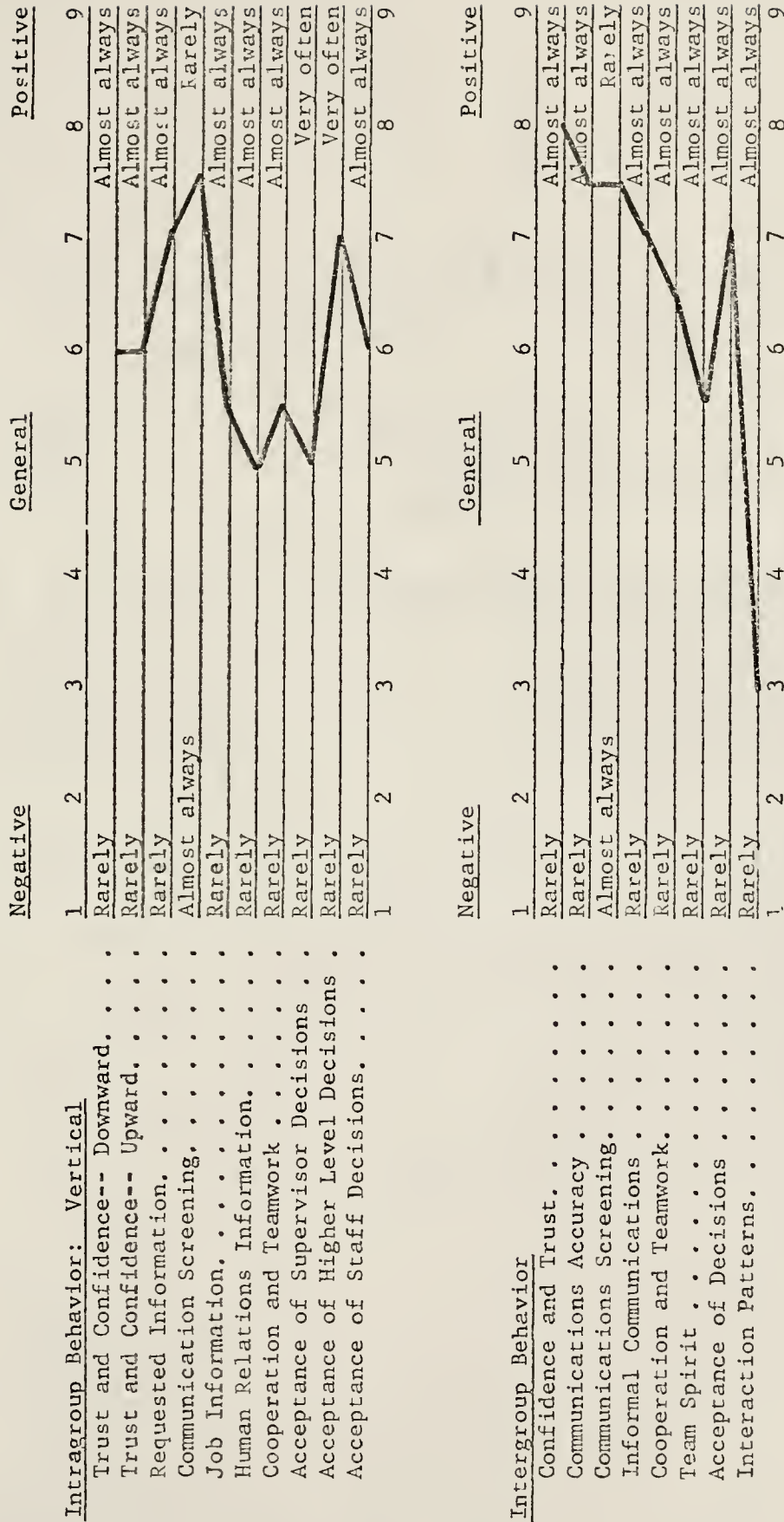


Fig. 60.--Continued

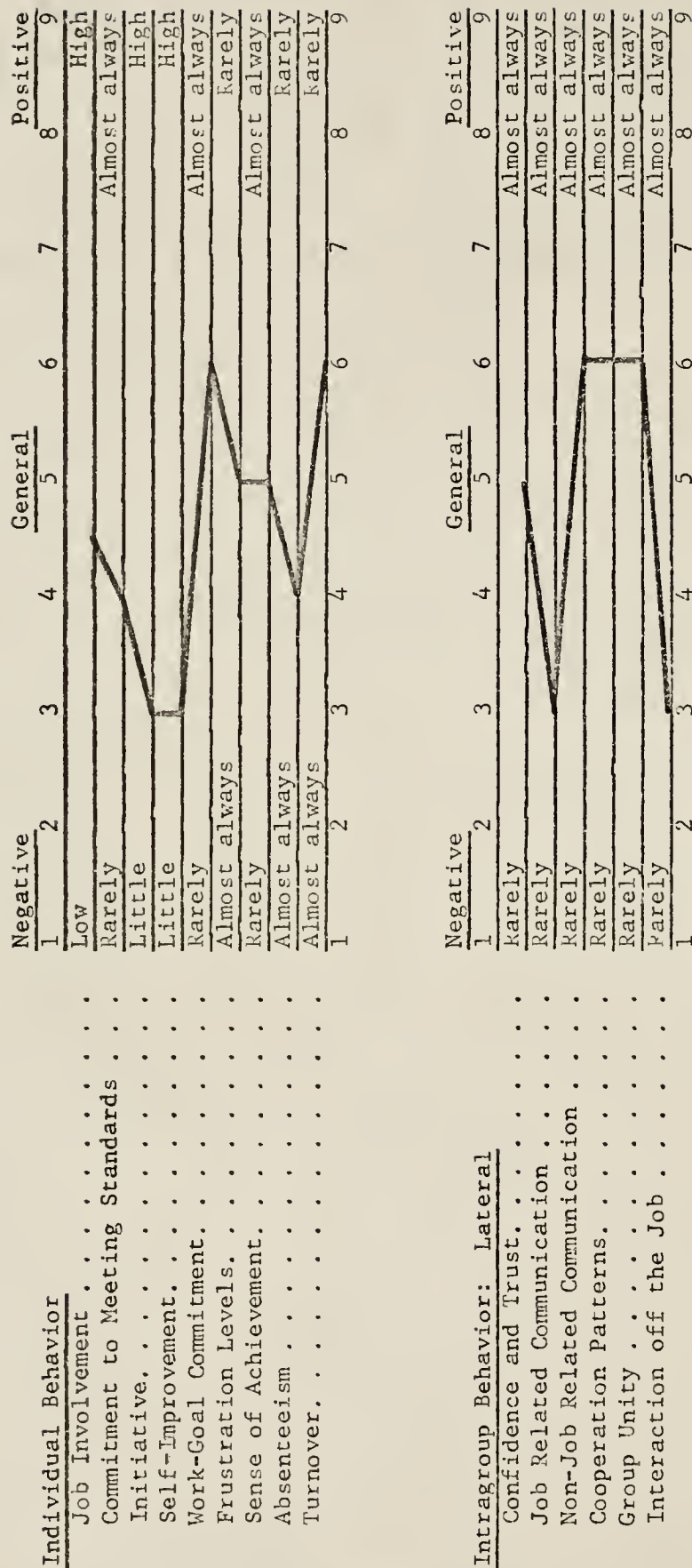


Fig. 61.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 5, Plant B.

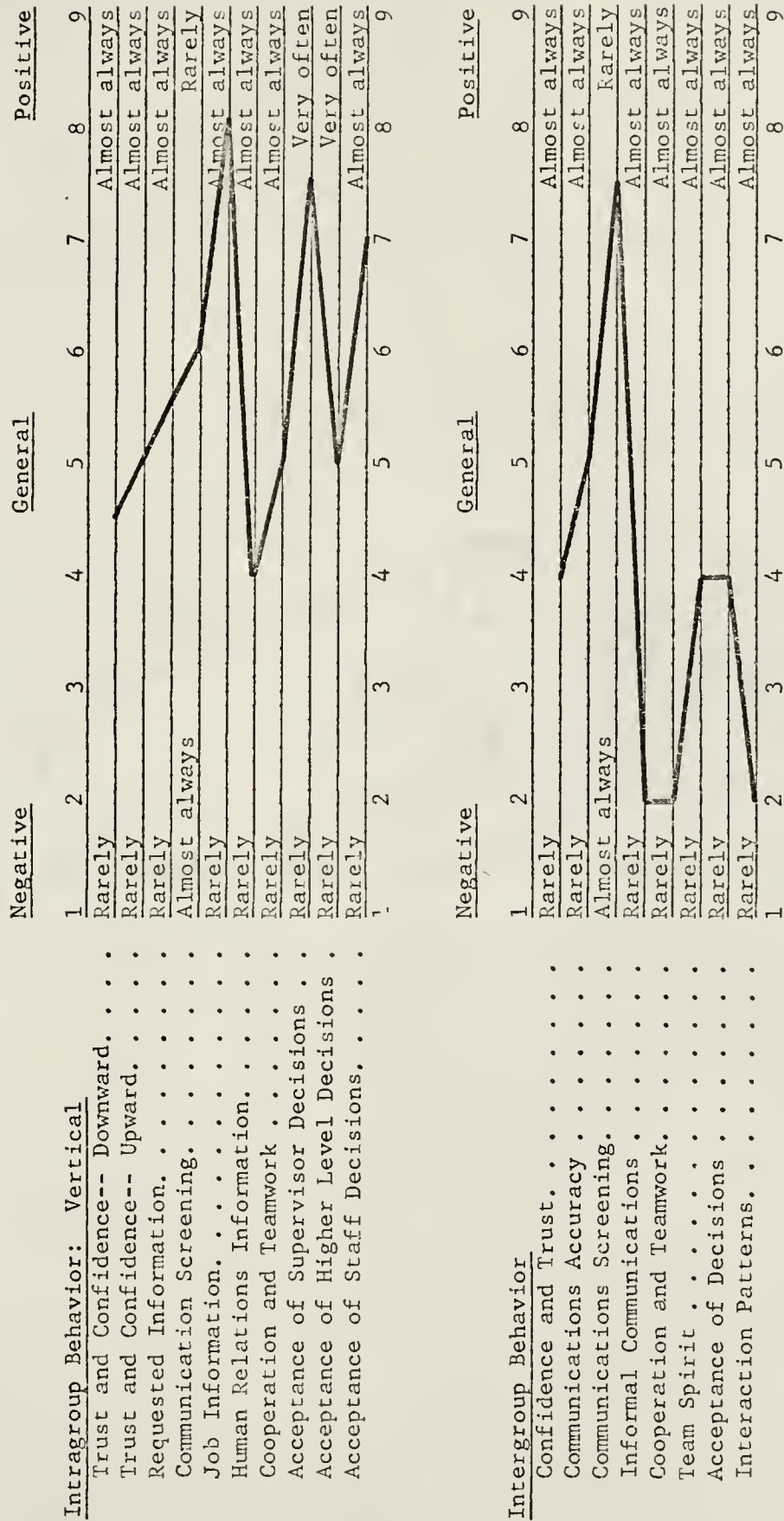


Fig. 61.--Continued

APPENDIX F

PRIMARY AND MEDIATING STRUCTURAL, LEADERSHIP,
AND BEHAVIORAL PROFILES OF PLANT C

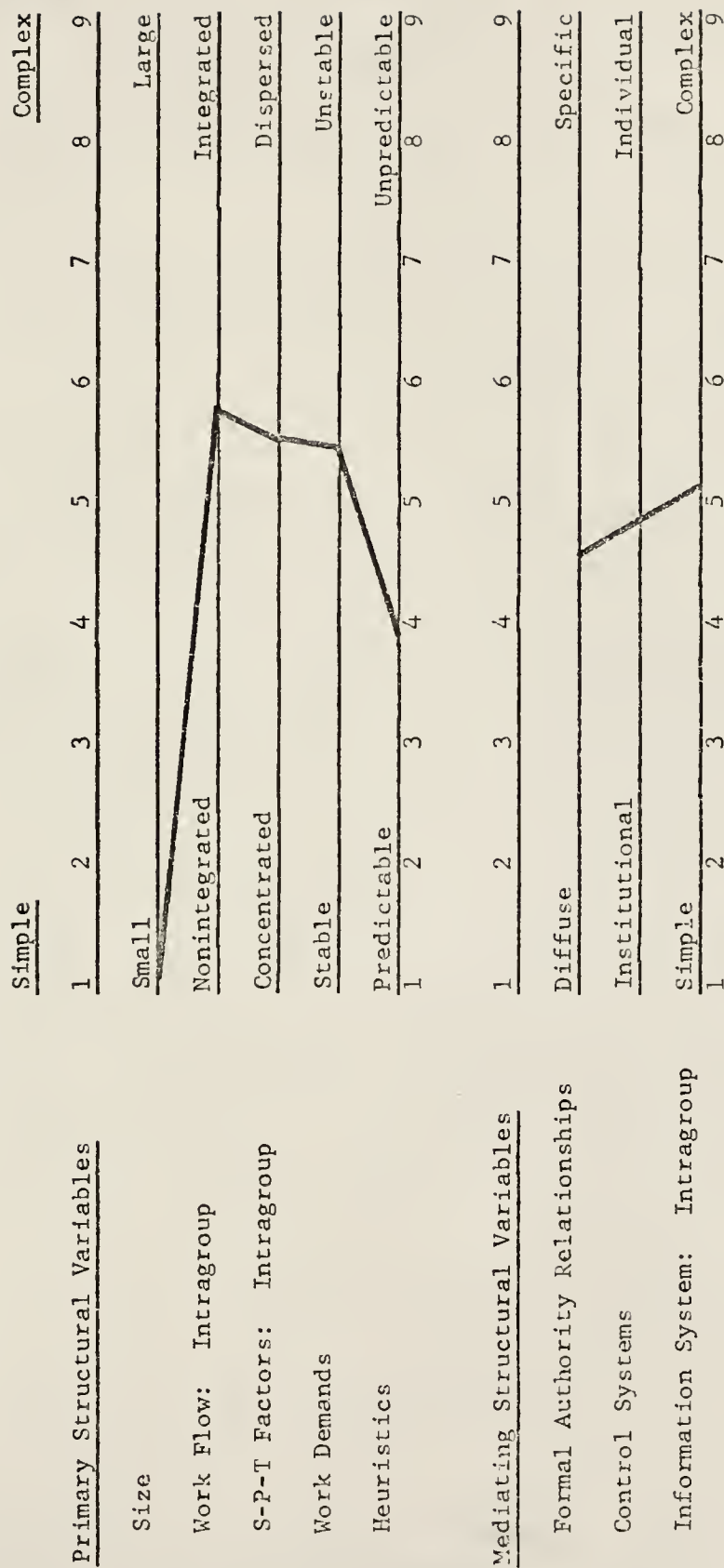


Fig. 62.--Primary and Mediating Structural Variable Profile, Work Group 1, Plant C.

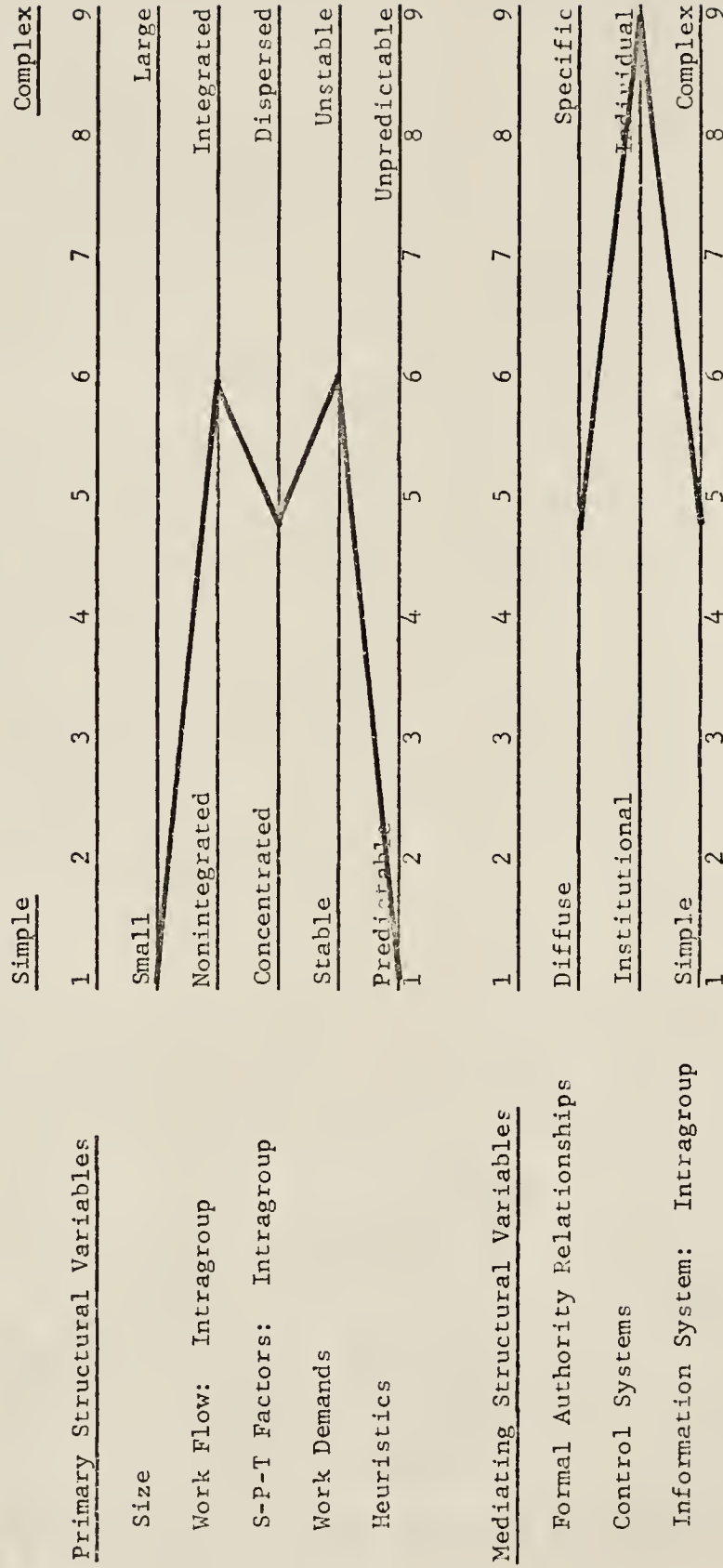


Fig. 63.--Primary and Mediating Structural Variable Profile, Work Group 2, Plant C.

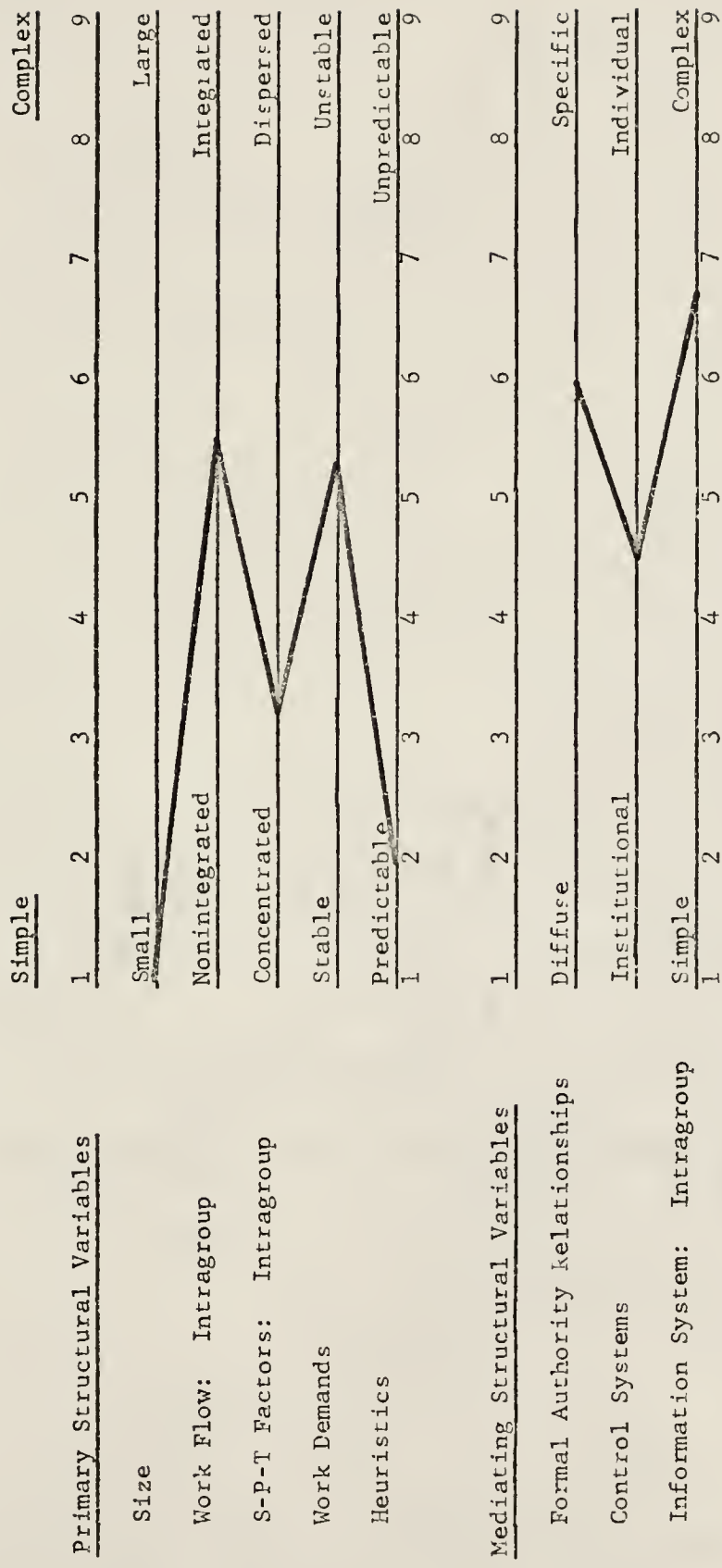


Fig. 64.--Primary and Mediating Structural Variable Profile, Work Group 3, Plant C.

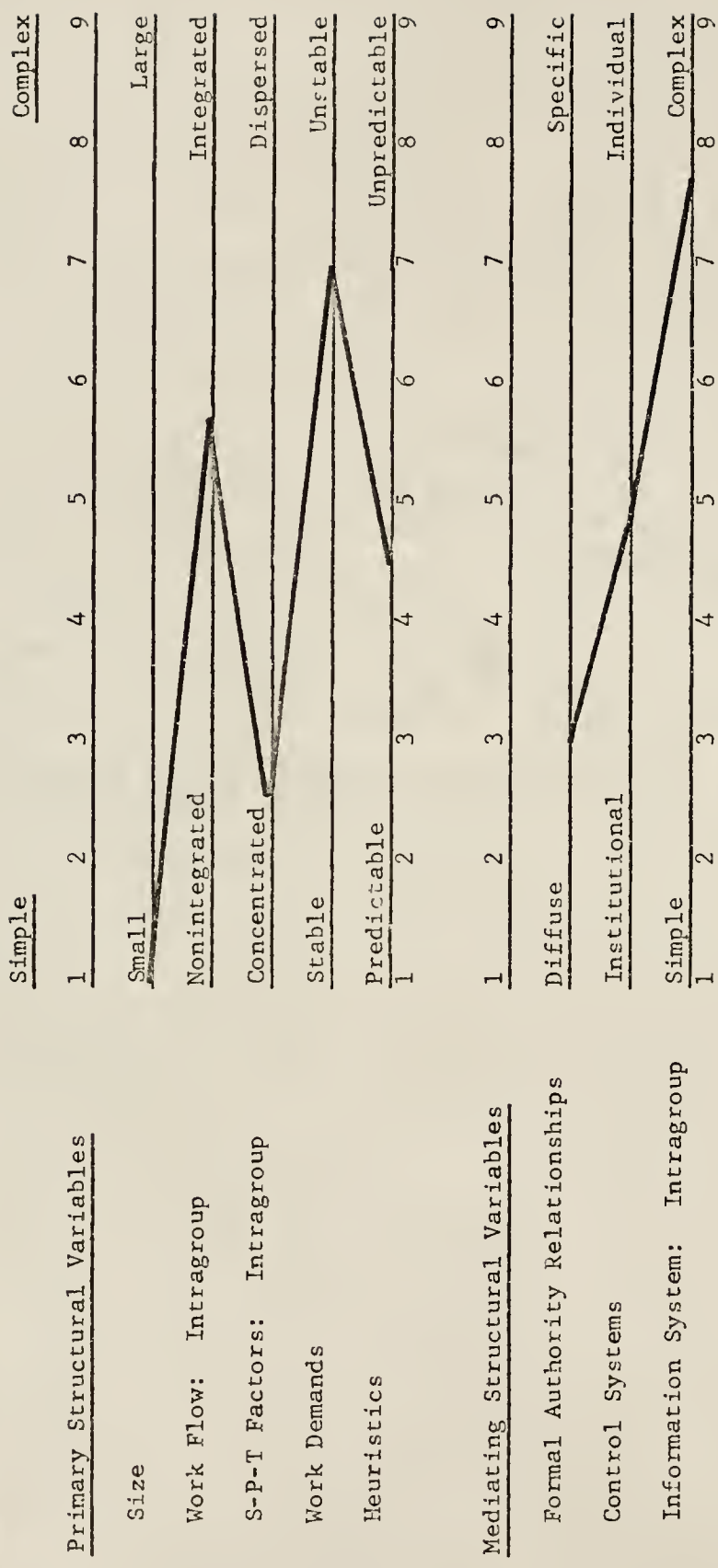


Fig. 65.--Primary and Mediating Structural Variable Profile, Work Group 4, Plant C.

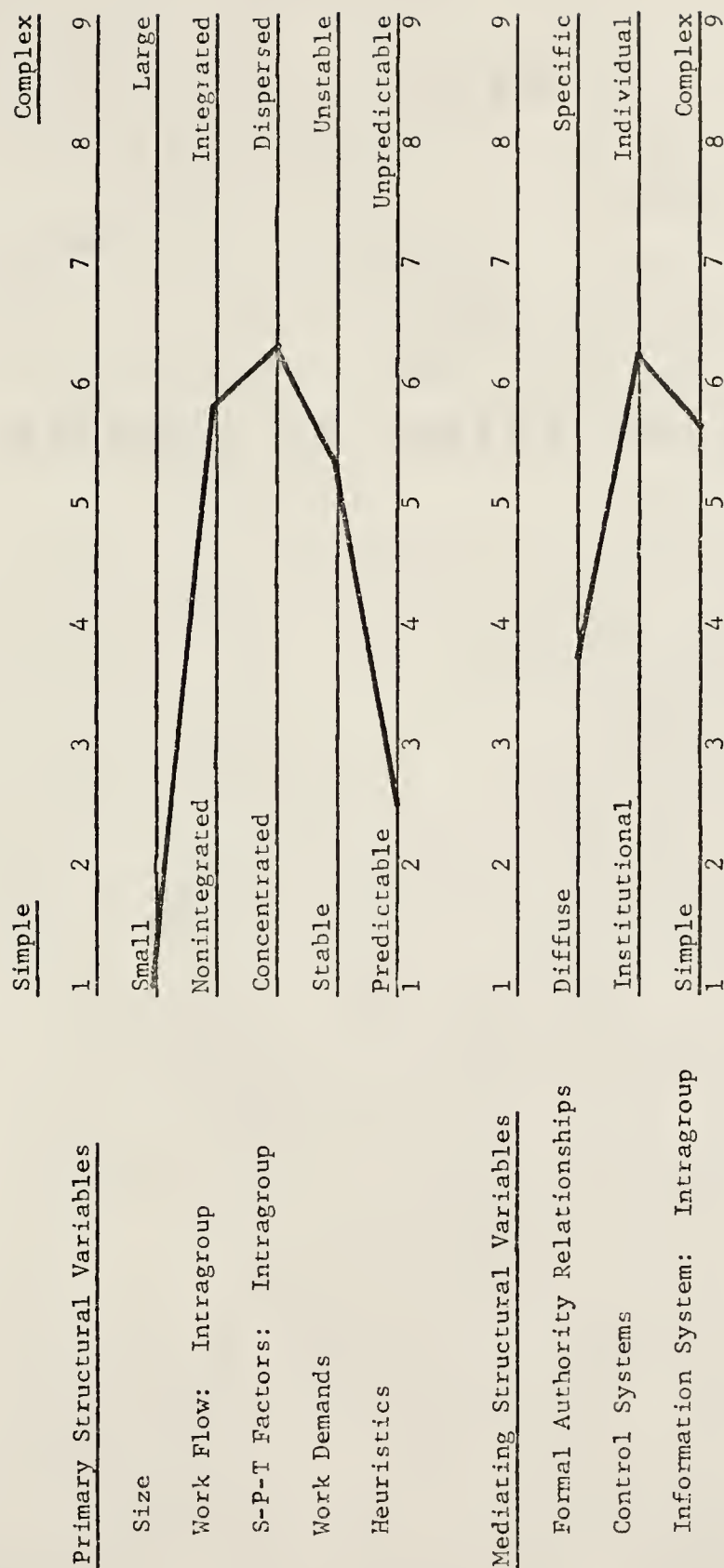


Fig. 66.--Primary and Mediating Structural Variable Profile, Work Group 5, Plant C.

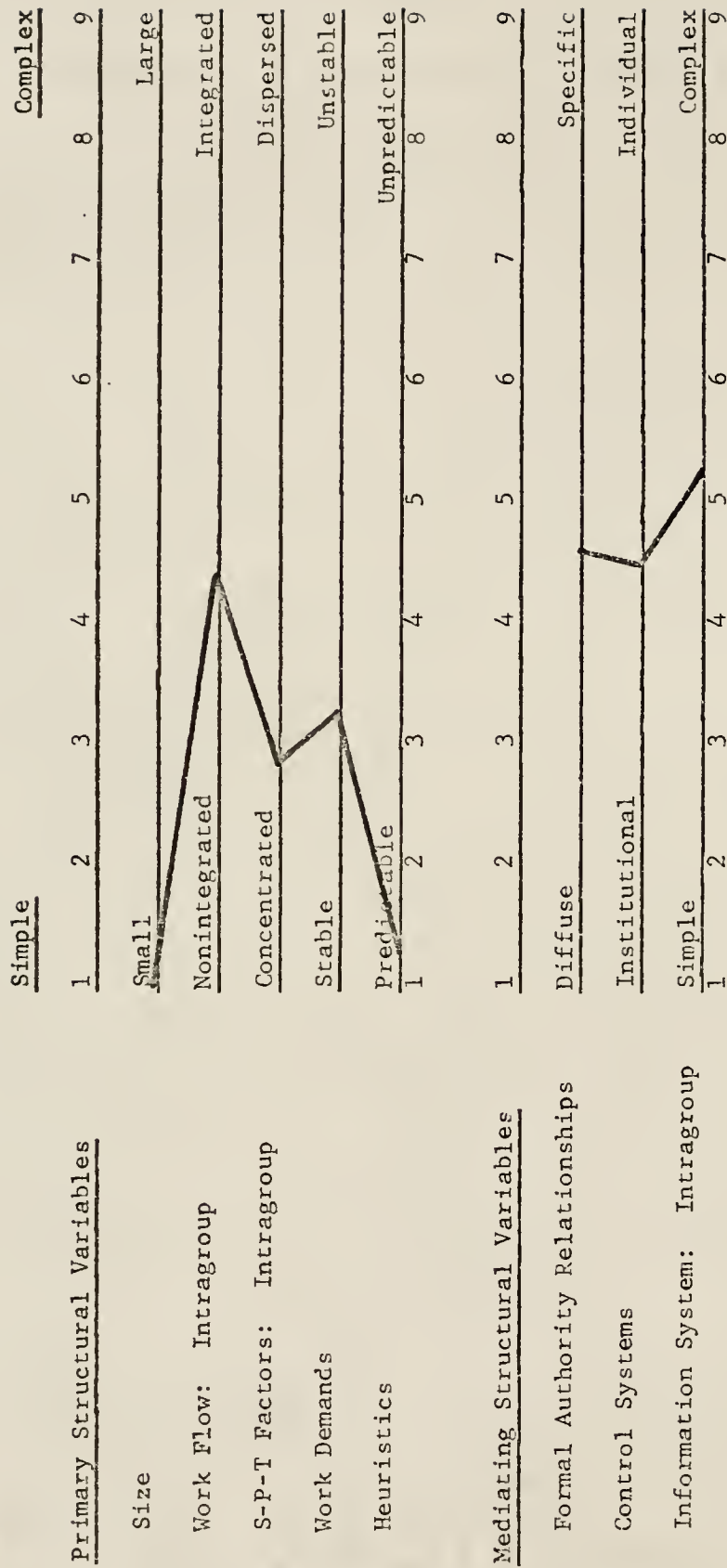


Fig. 67.--Primary and Mediating Structural Variable Profile, Work Group 6, Plant C.

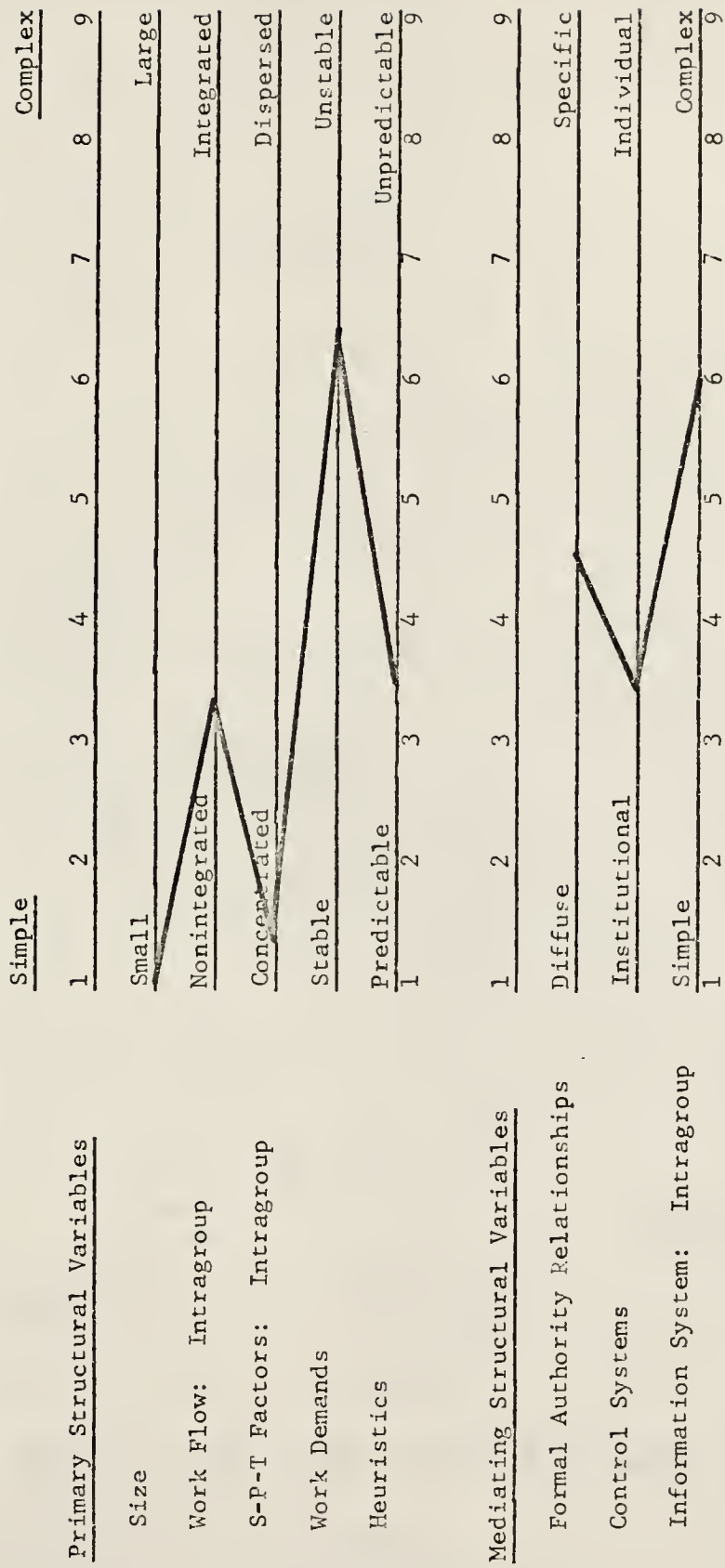


Fig. 68.--Primary and Mediating Structural Variable Profile, Work Group 7, Plant C.

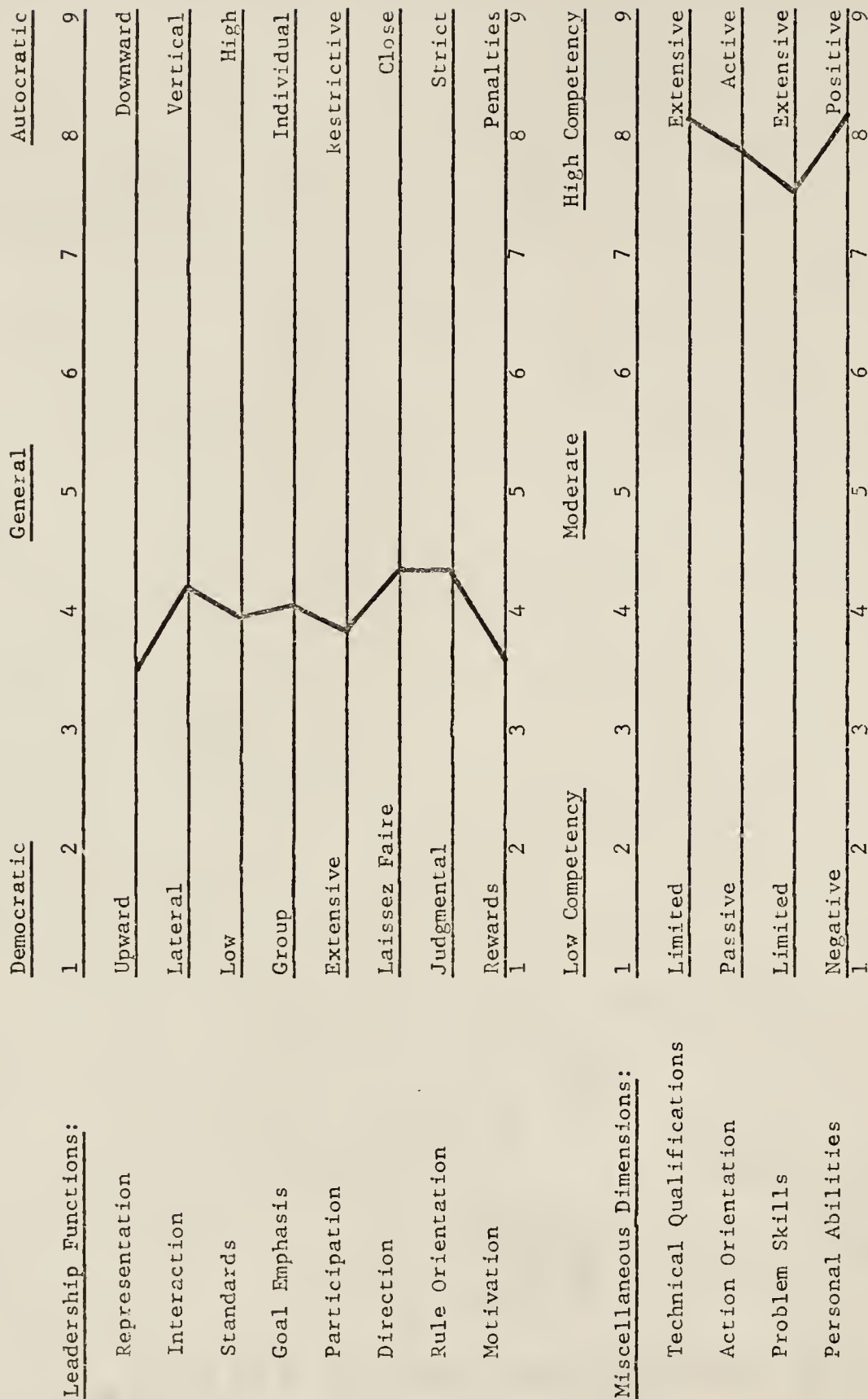


Fig. 69.--Plant Manager's Leadership Profile, Plant C.



Fig. 70.--Assistant Plant Manager's Leadership Profile, Plant C.

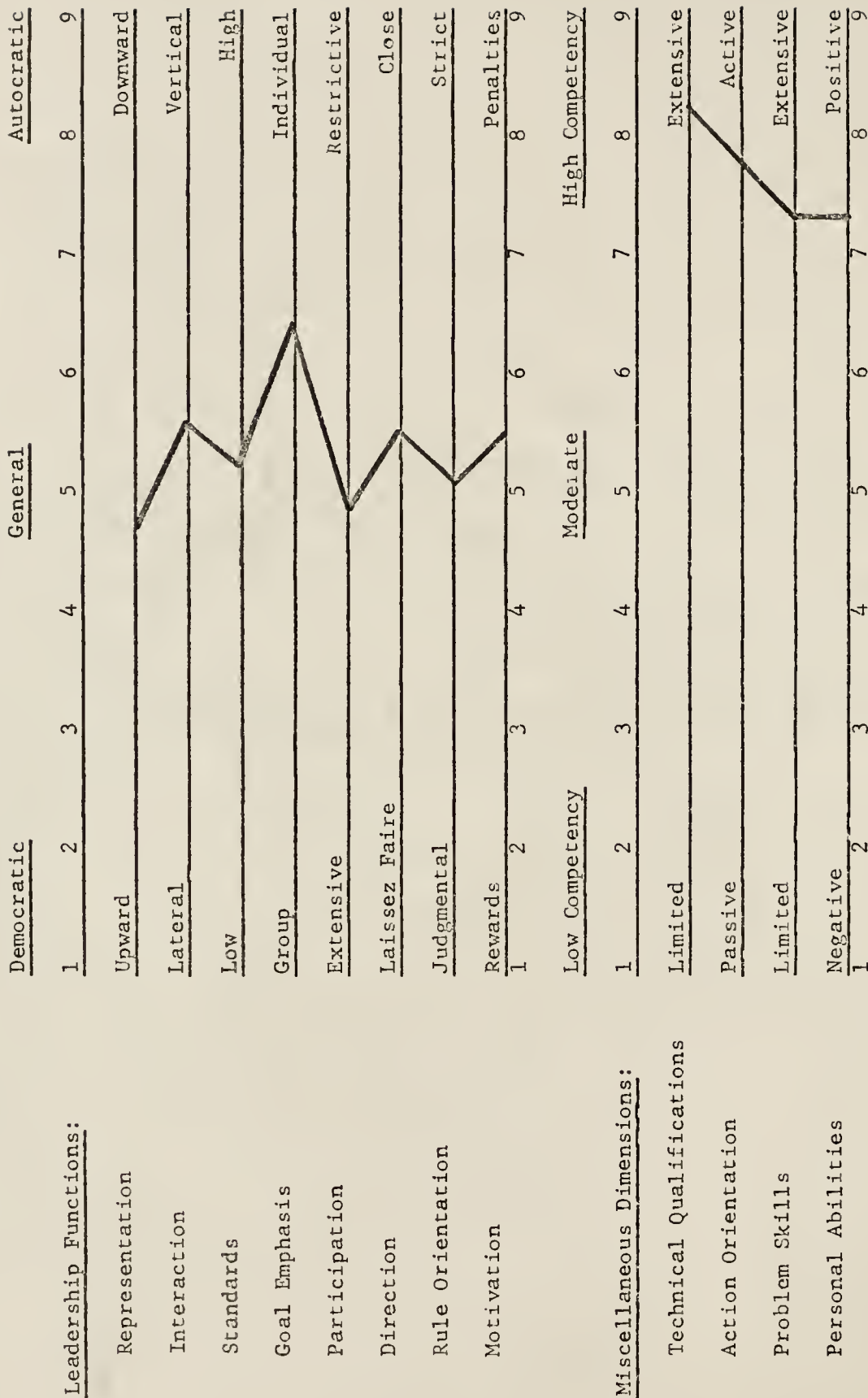


Fig. 71.--Second Level Supervisor's Leadership Profile, Work Group 1, Plant C.



Fig. 72.--Second Level Supervisor's Leadership Profile, Work Group 5, Plant C.

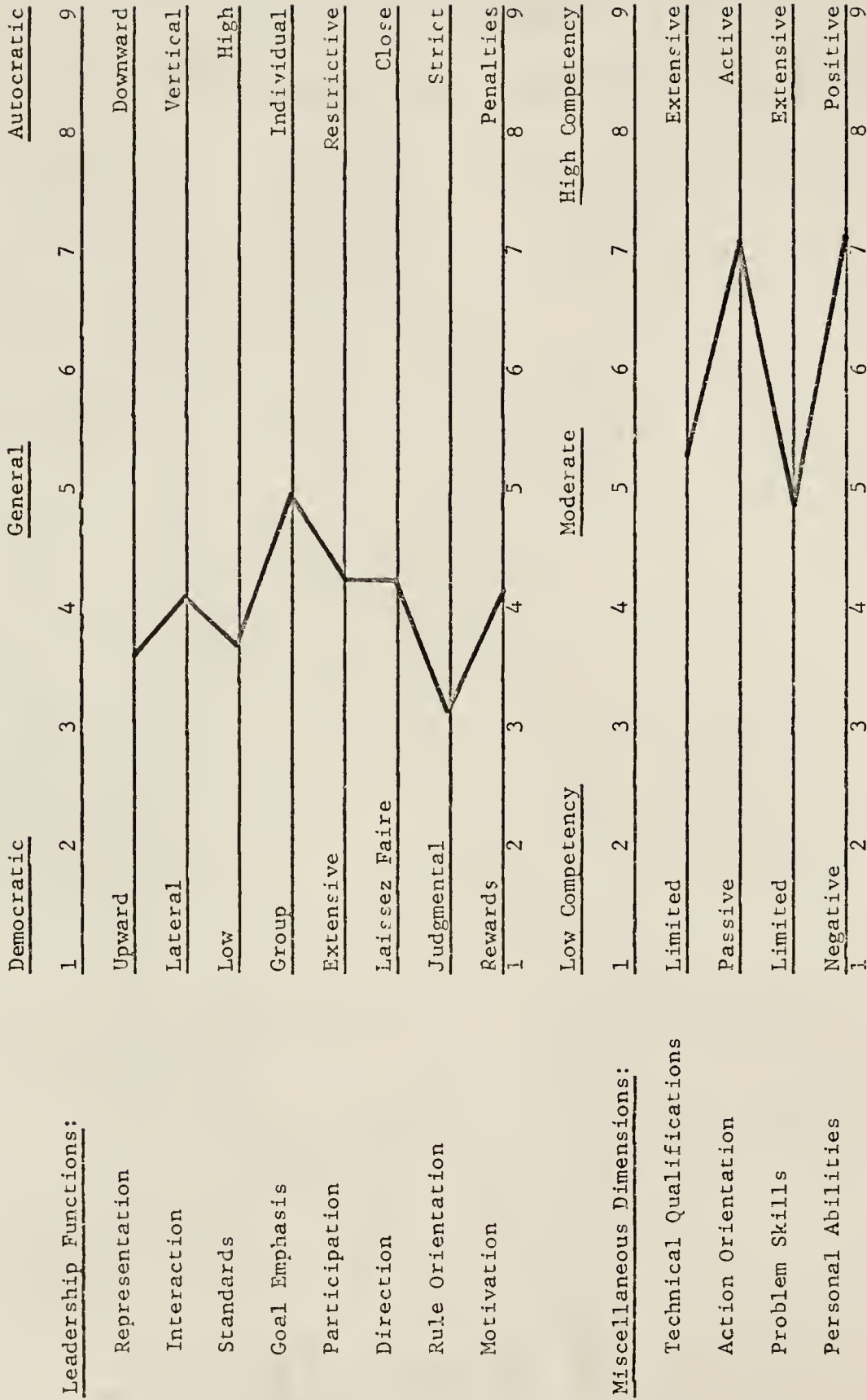


Fig. 73.--Second Level Supervisor's Leadership Profile, Work Group 6, Plant C.



Fig. 74.--Second Level Supervisor's Leadership Profile, Work Group 7, Plant C.

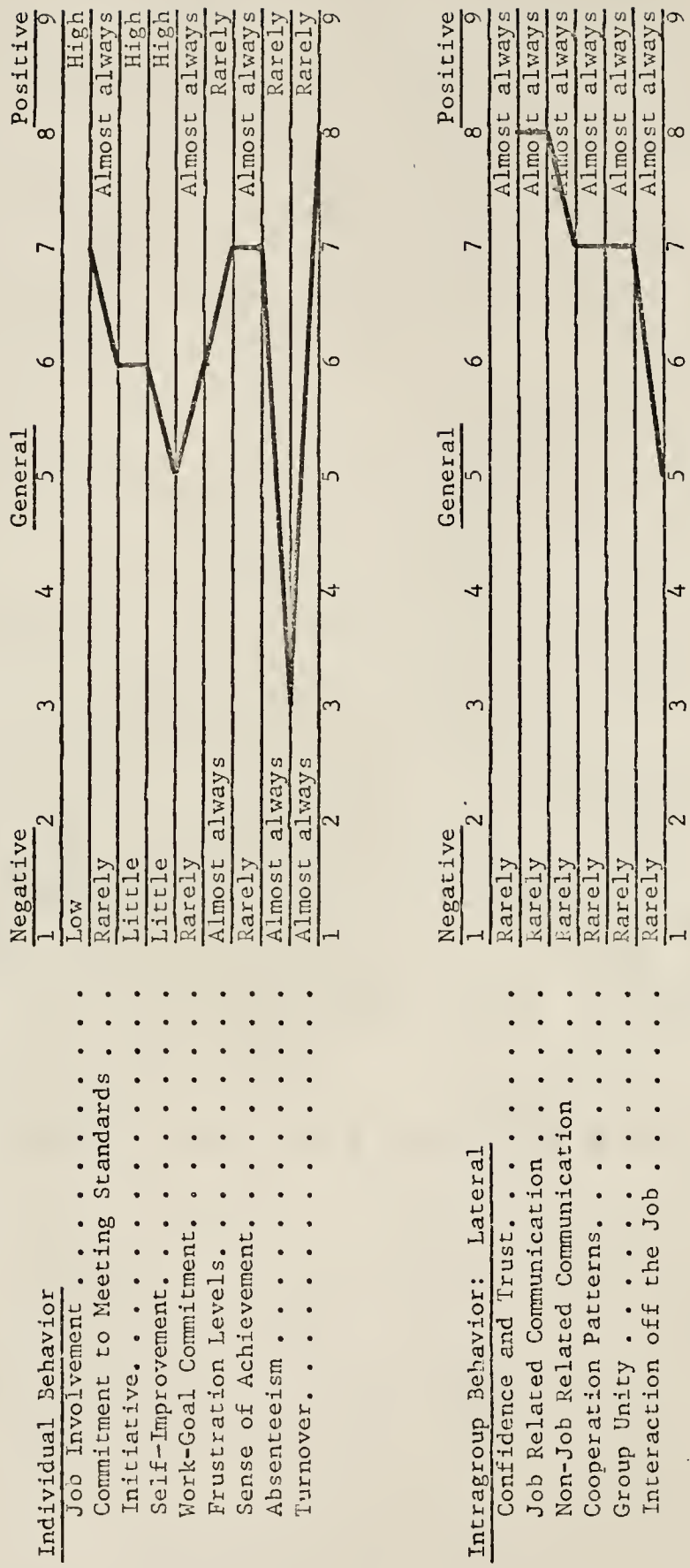


Fig. 75.--Behavioral Profile of Employees, Assistant Plant Manager's Response, Work Groups 1, 2, and 3, Plant C.

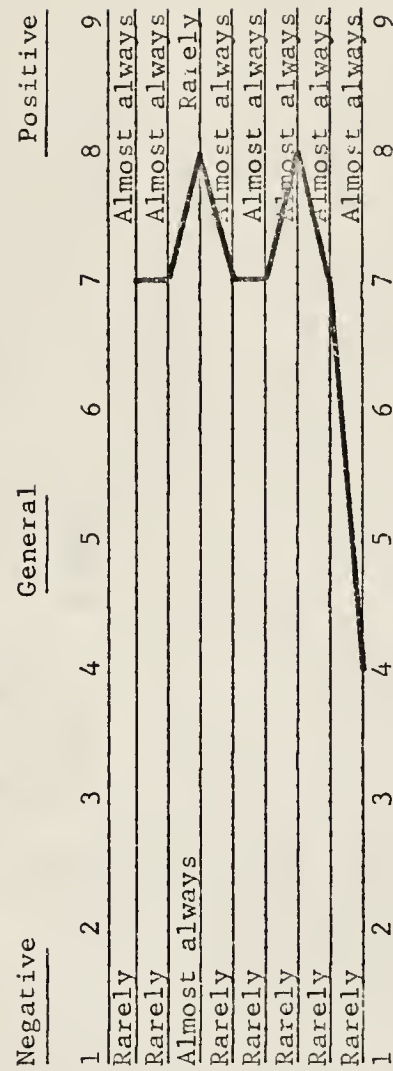
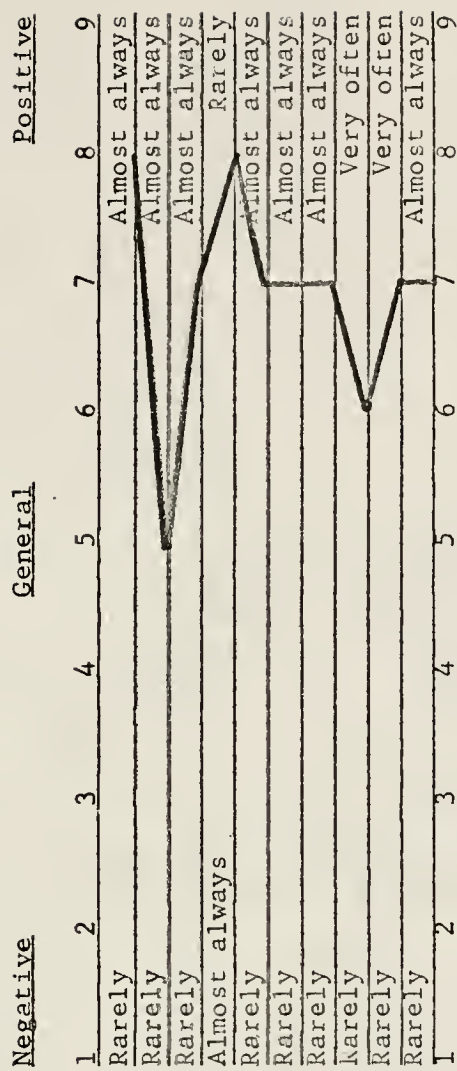


Fig. 75.--Continued

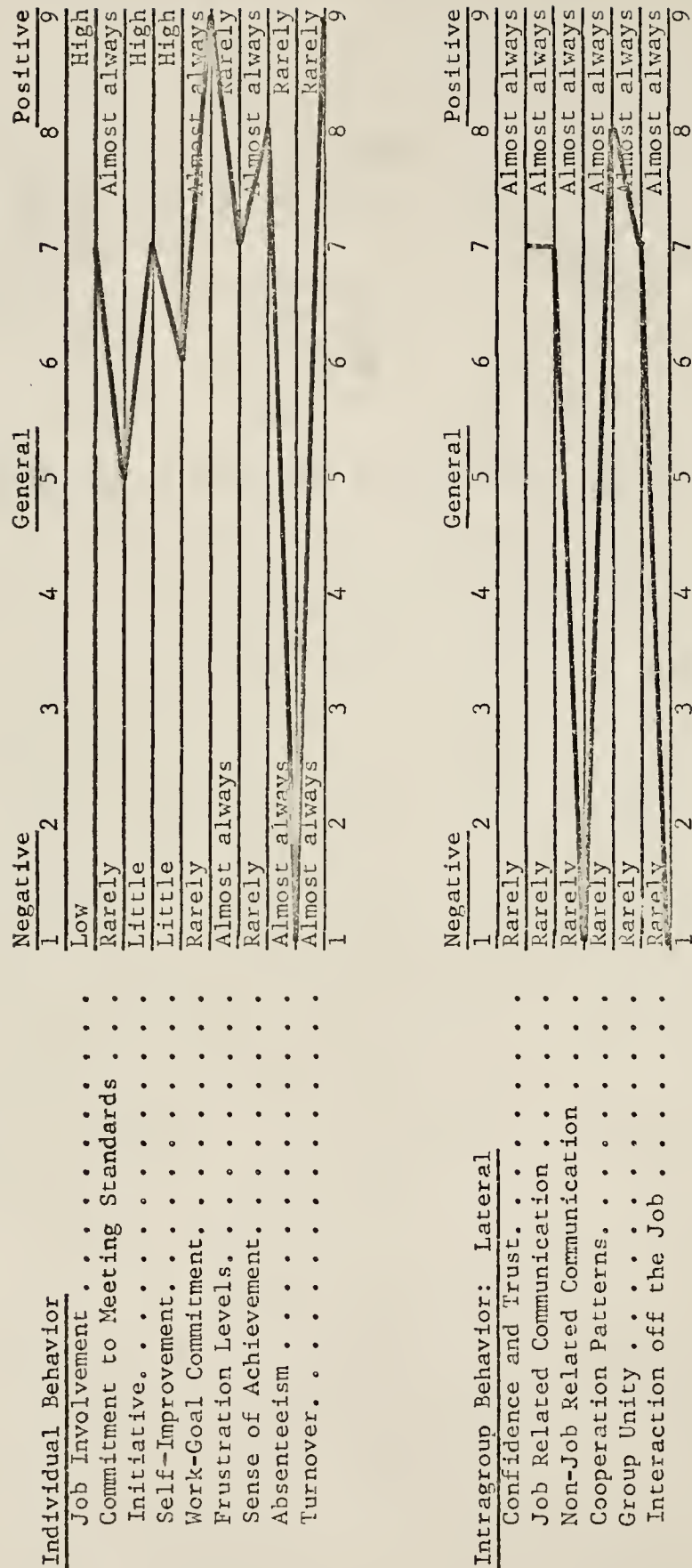


Fig. 76.--Behavioral Profile of Employees, Supervisor Response, Work Group 1, Plant C.

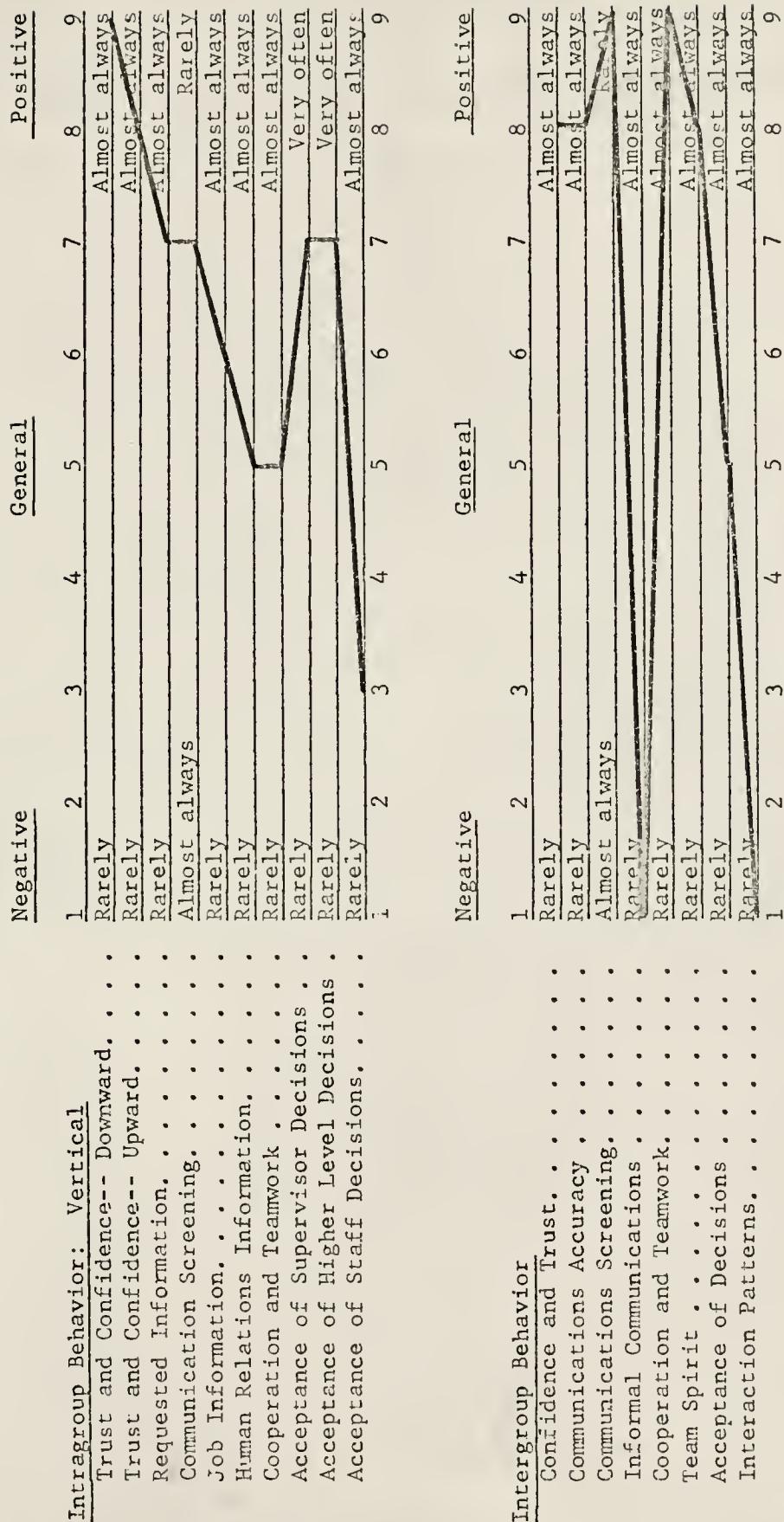


Fig. 76.--Continued

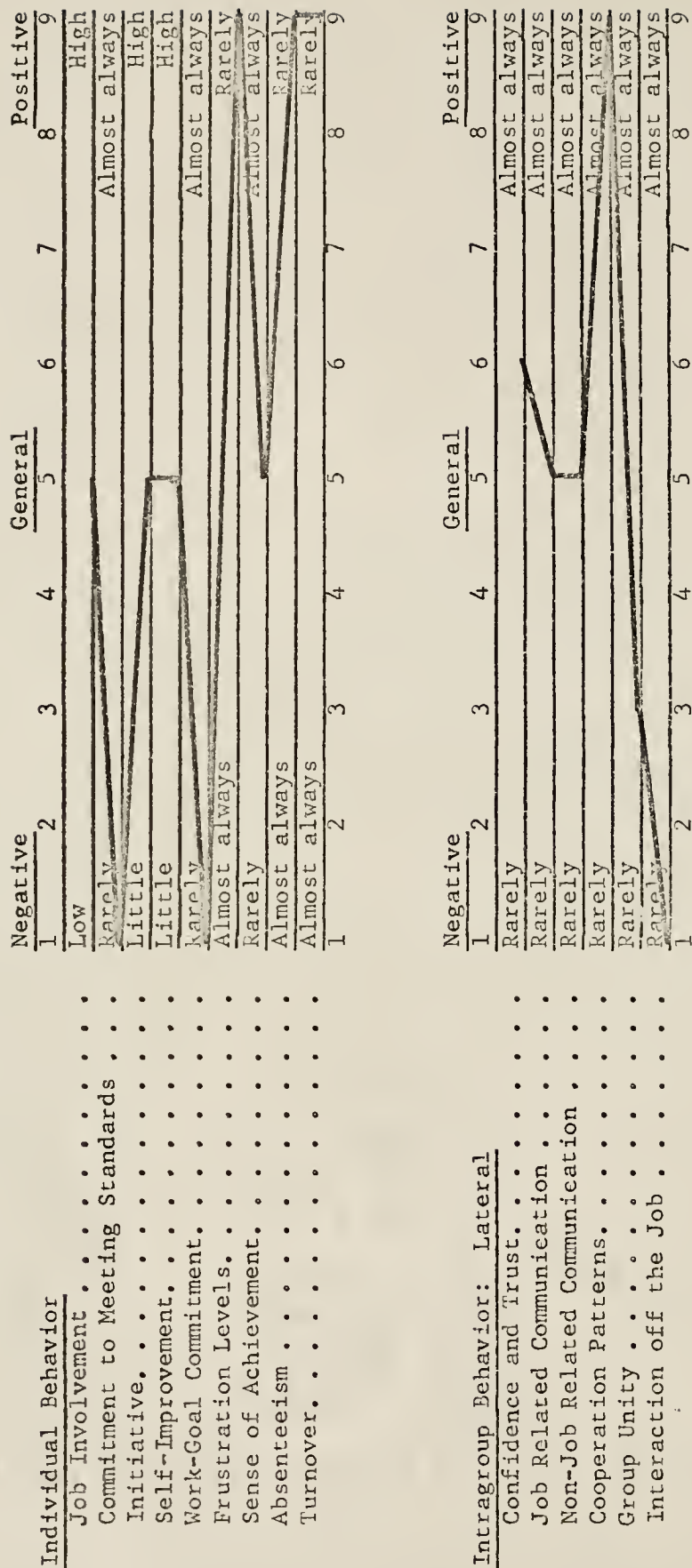


Fig. 77.--Behavioral Profile of Employees, Supervisor Response, Work Group 5, Plant C.

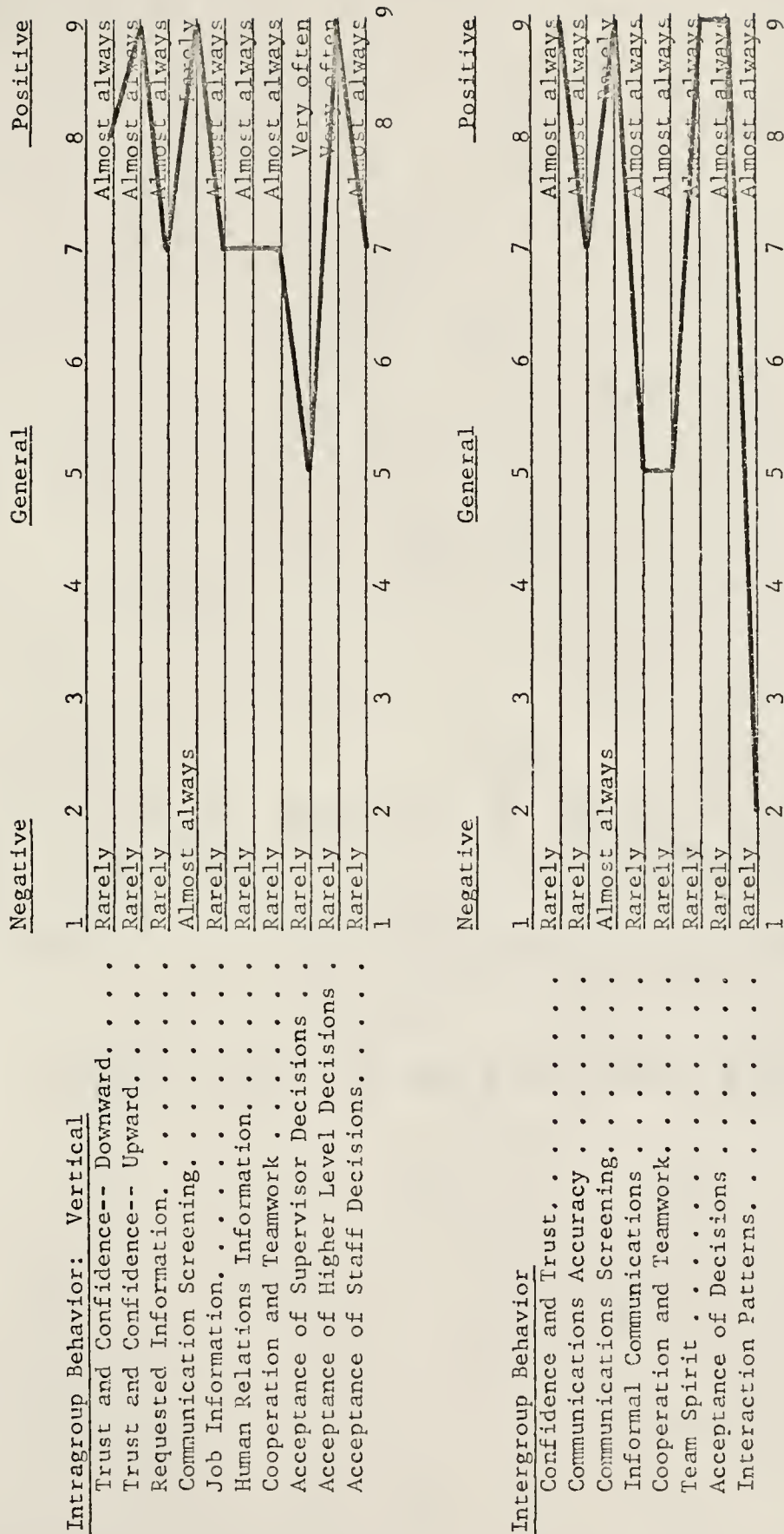


Fig. 77.--Continued

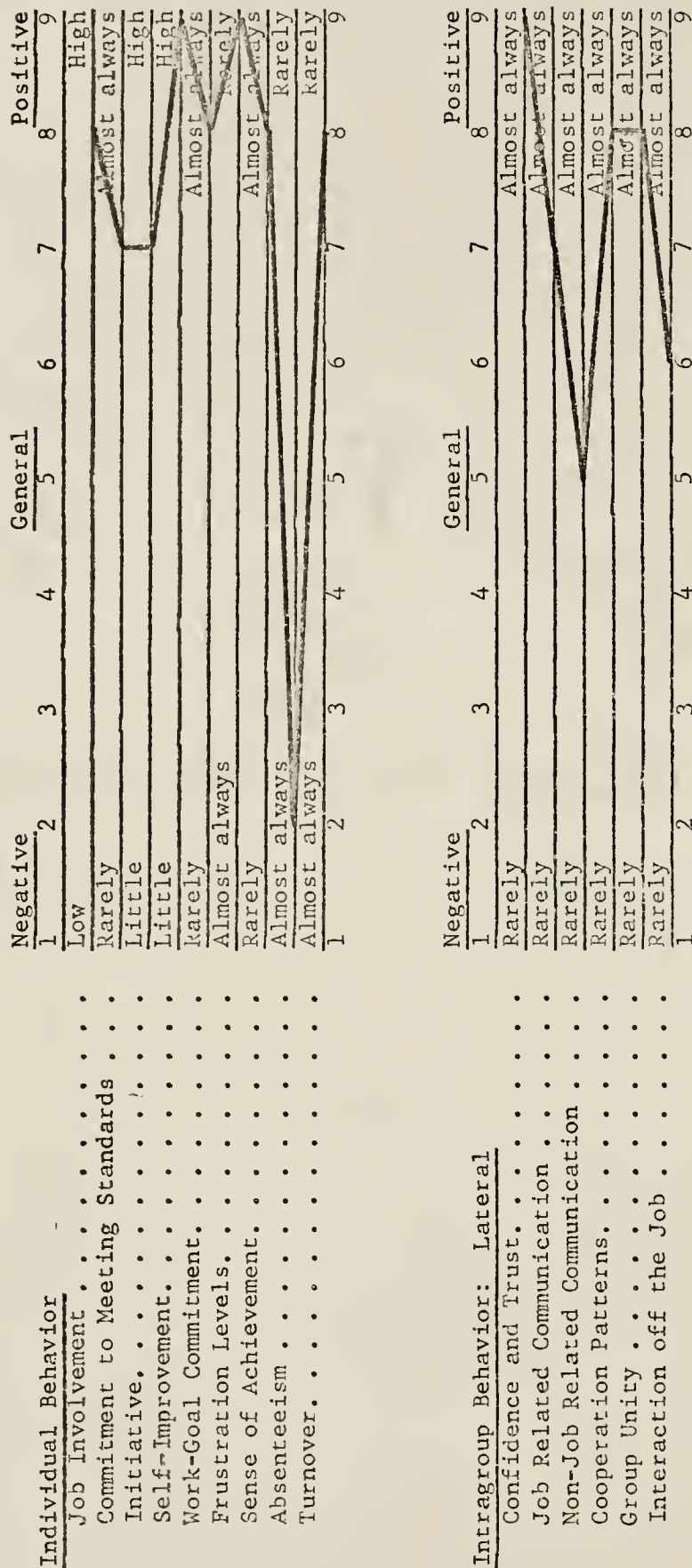


Fig. 78.--Behavioral Profile of Employees, Supervisor Response, Work Group 6, Plant C.

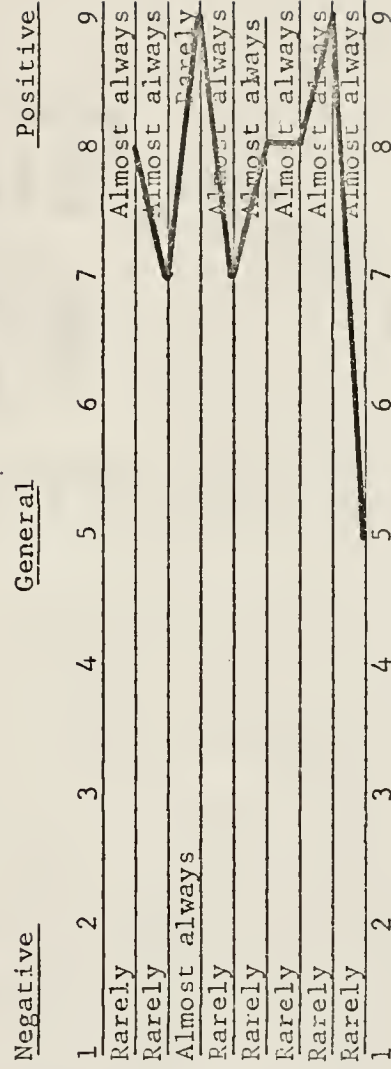
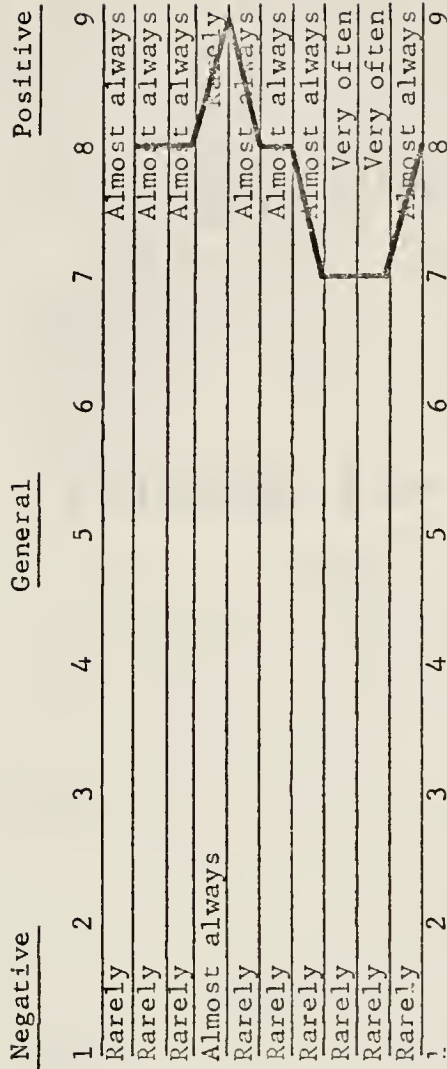


Fig. 78.--Continued

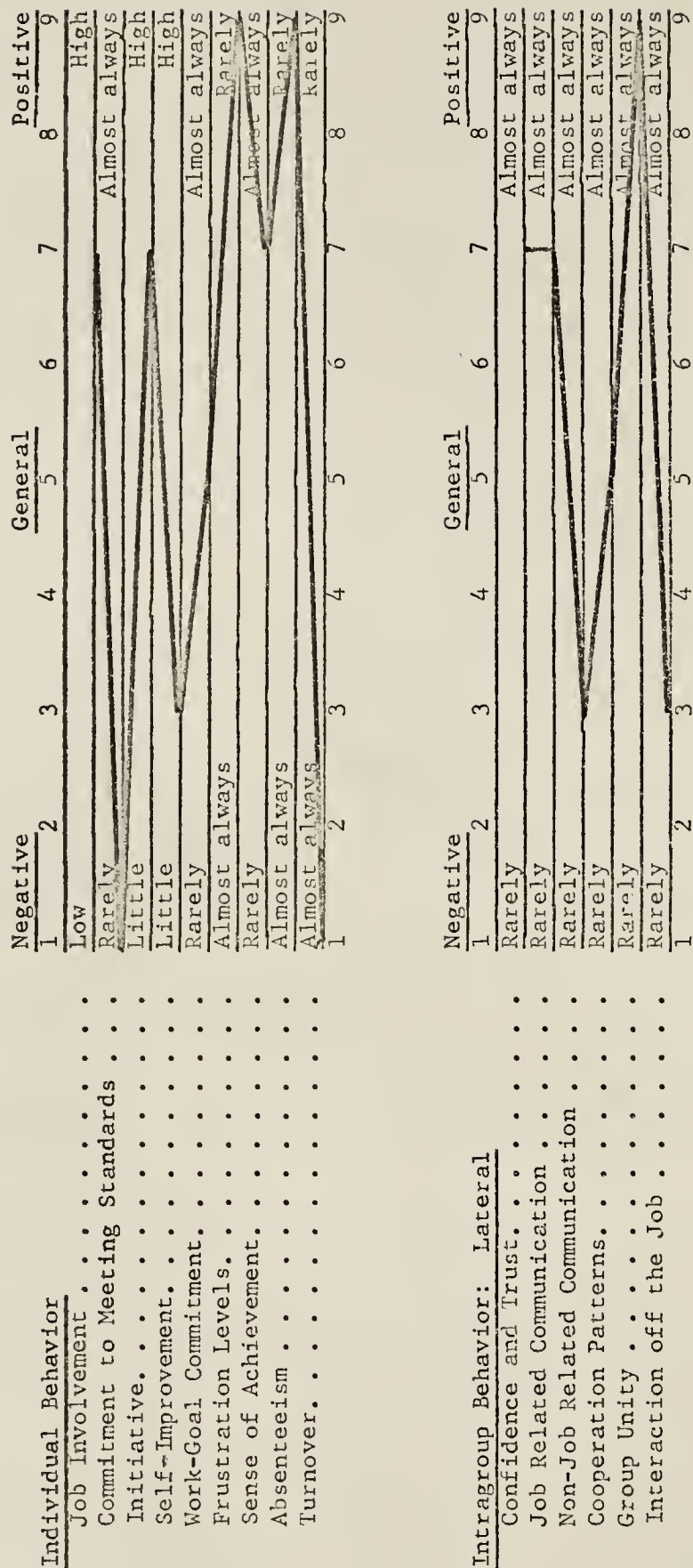


Fig. 79.---Behavioral Profile of Employees, Supervisor Response, Work Group 7, Plant C.

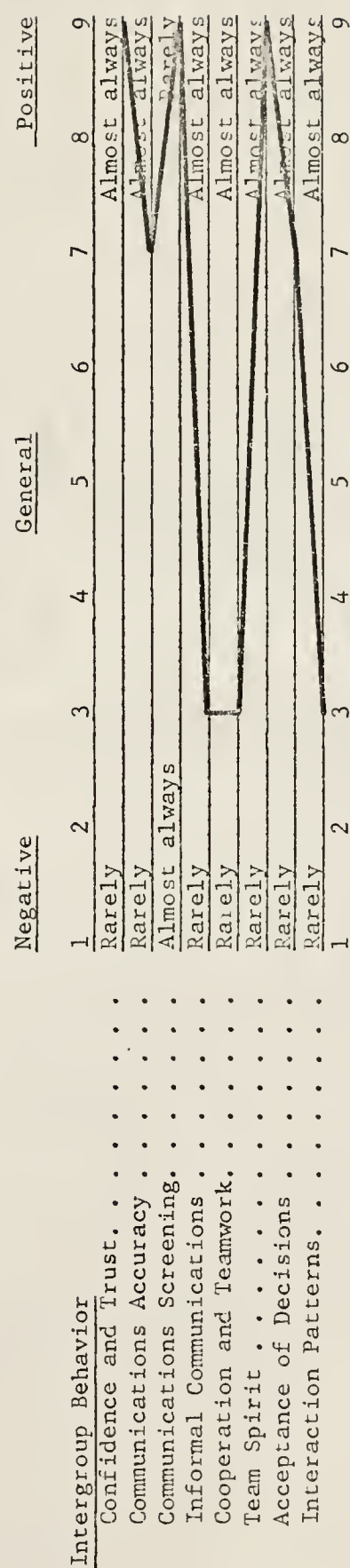
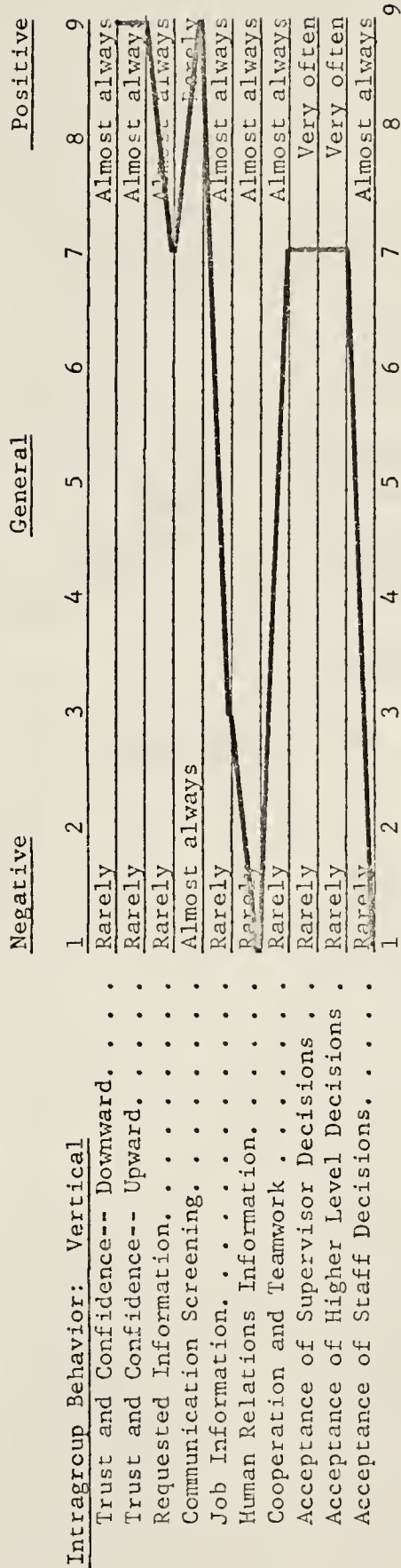


Fig. 79.--Continued

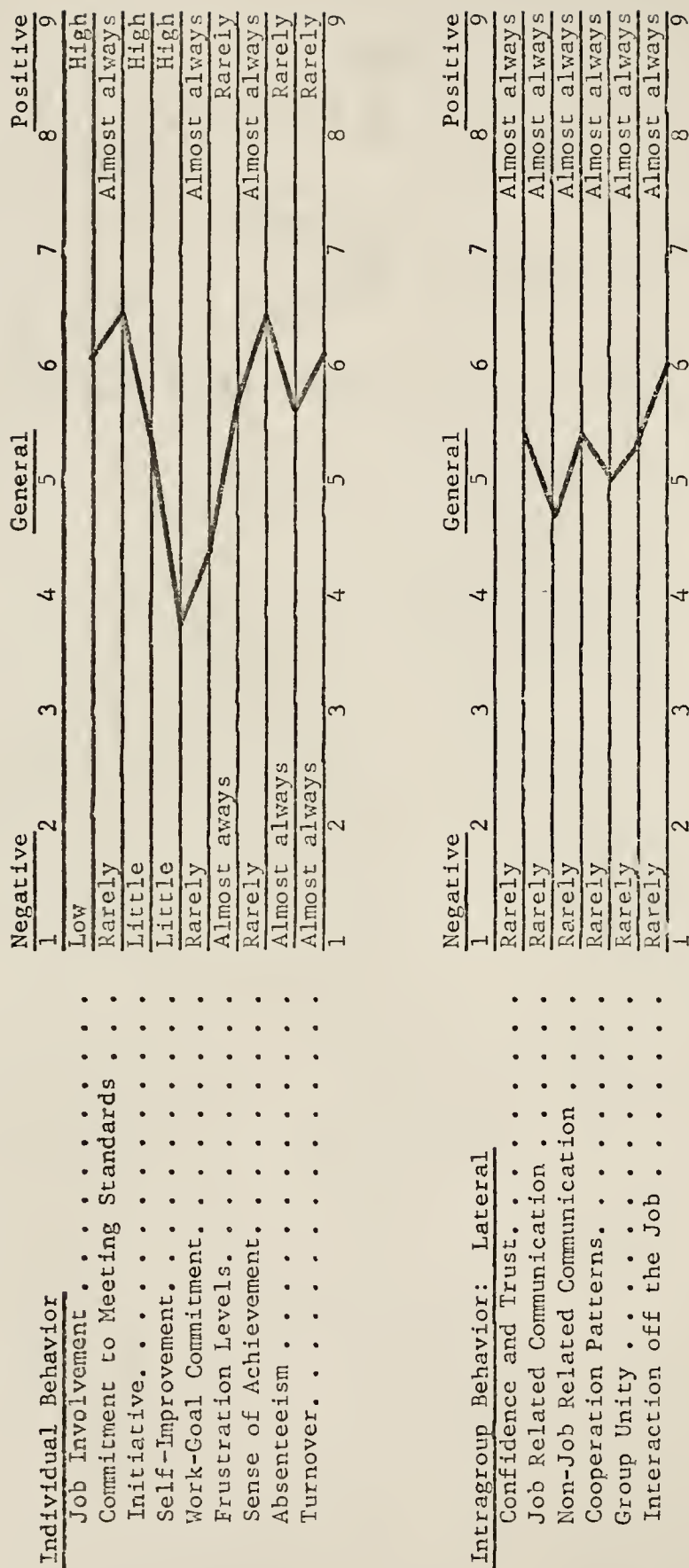


Fig. 80.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 1, Plant C.

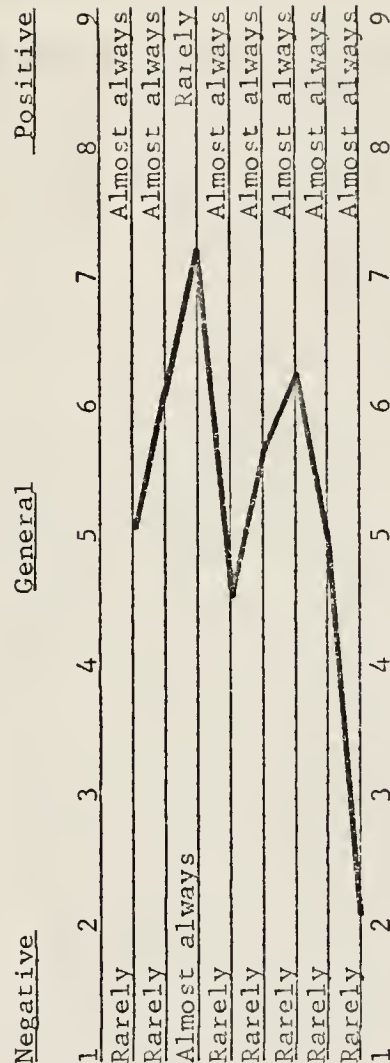
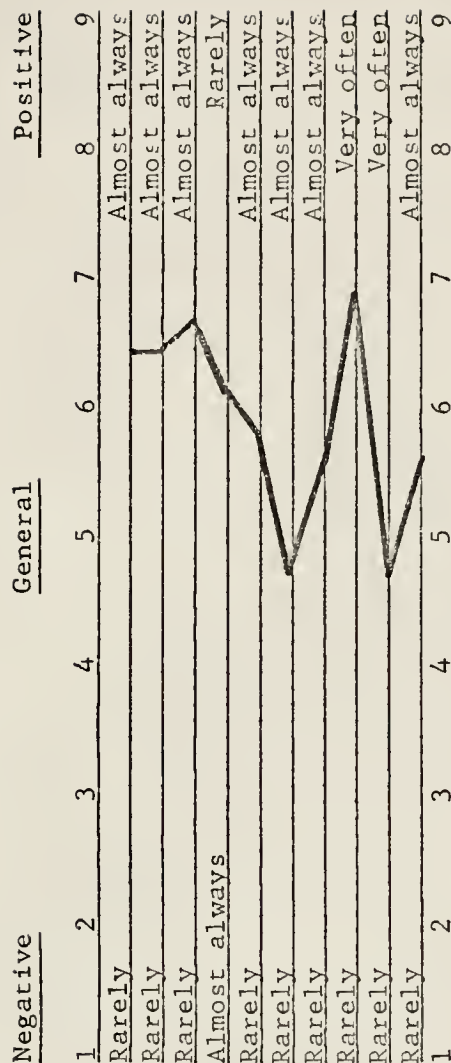


Fig. 80.--Continued

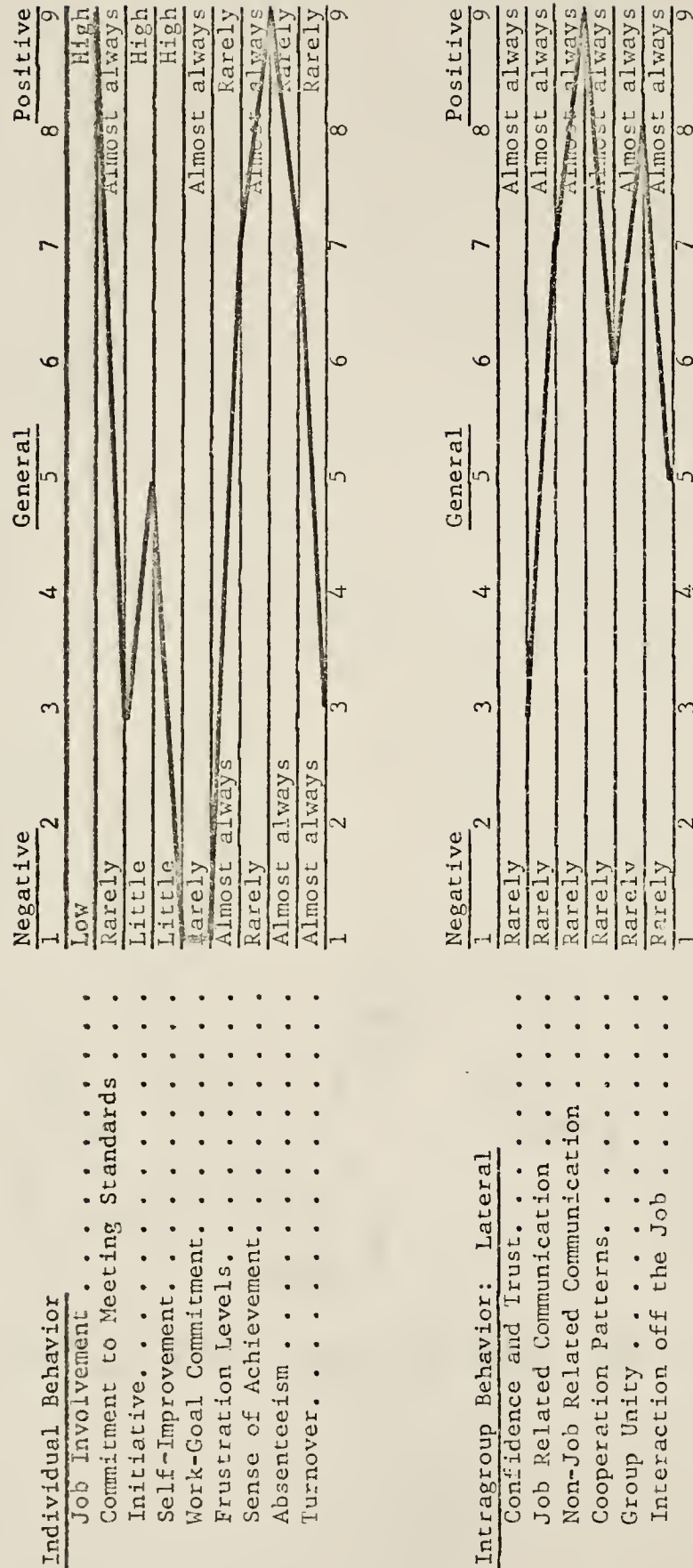


Fig. 81.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 5, Plant C.

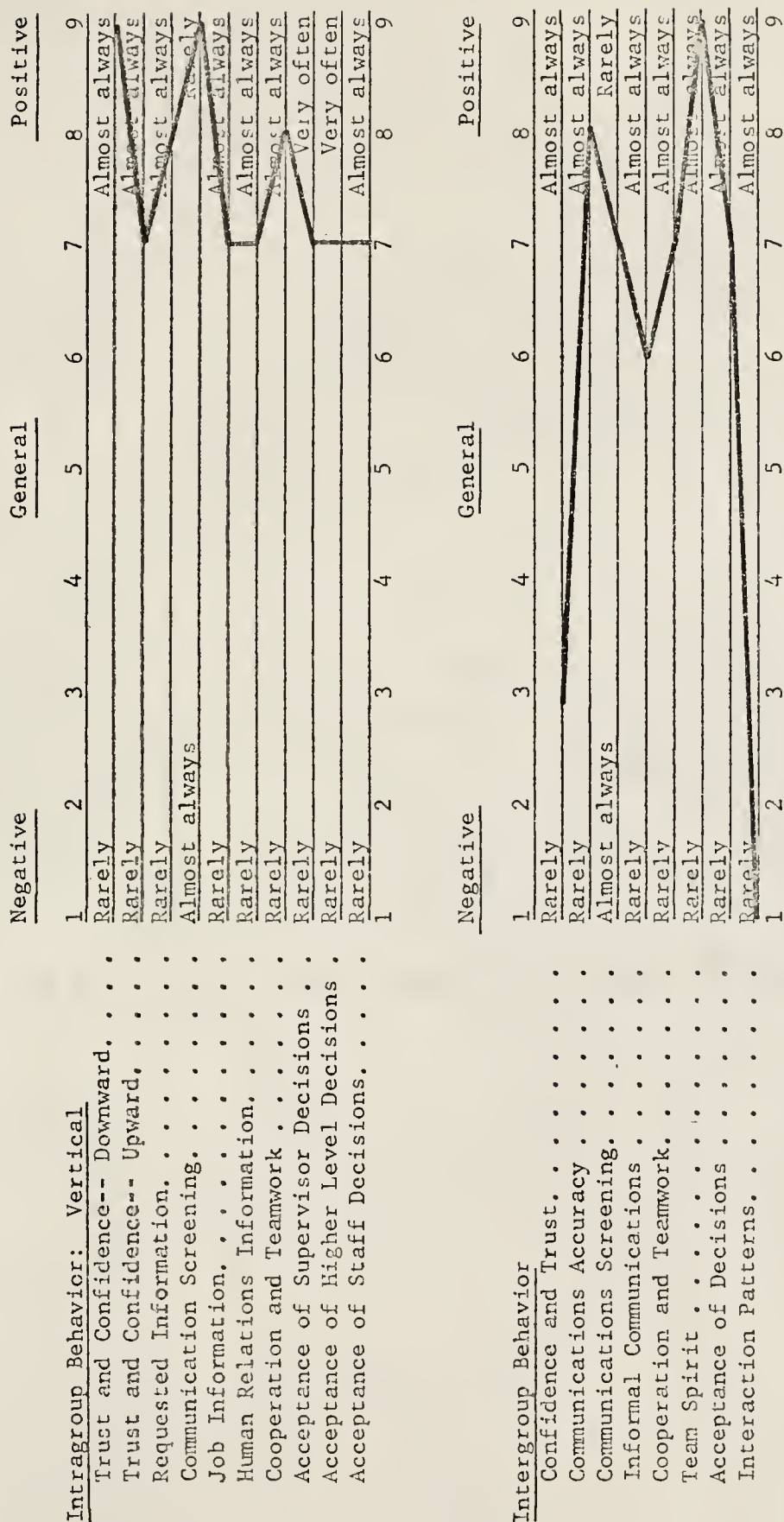


Fig. 81.--Continued

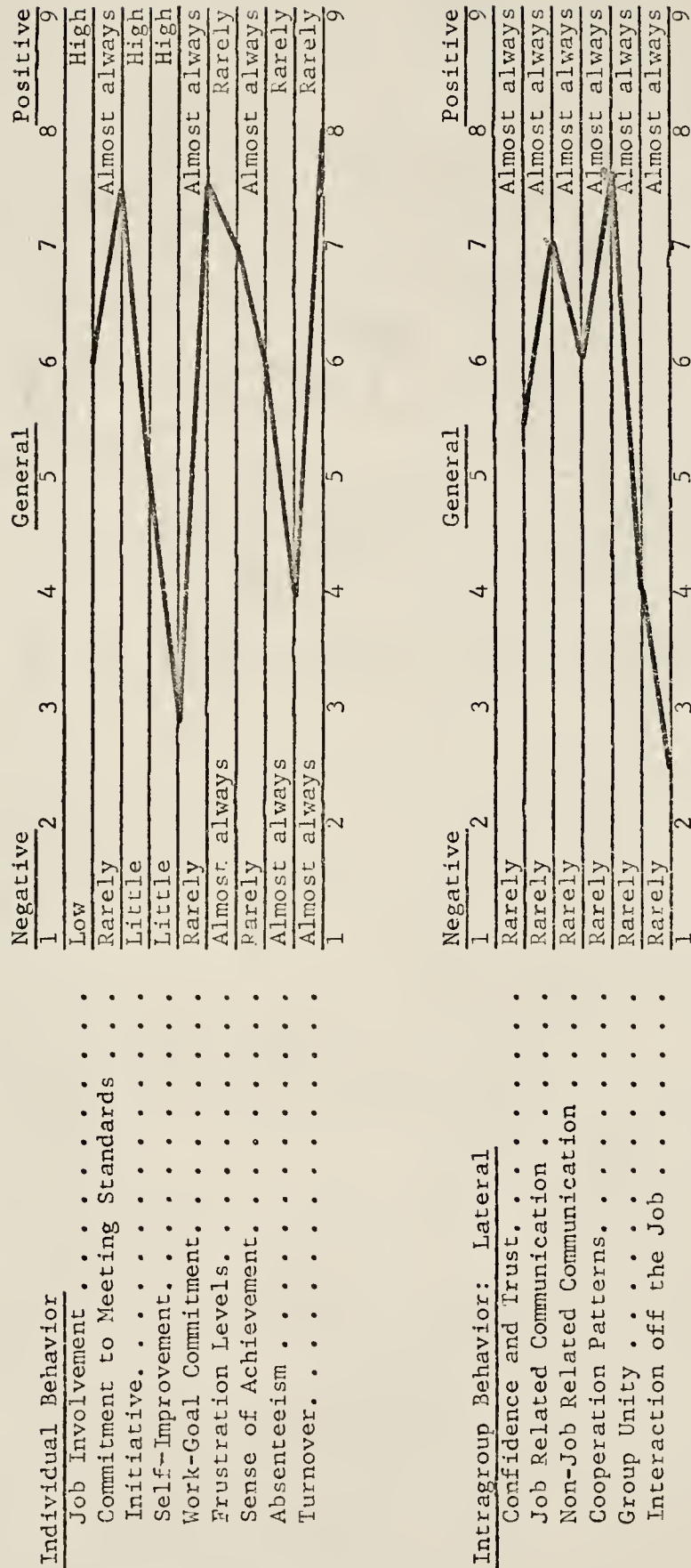


Fig. 82.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 6, Plant C.

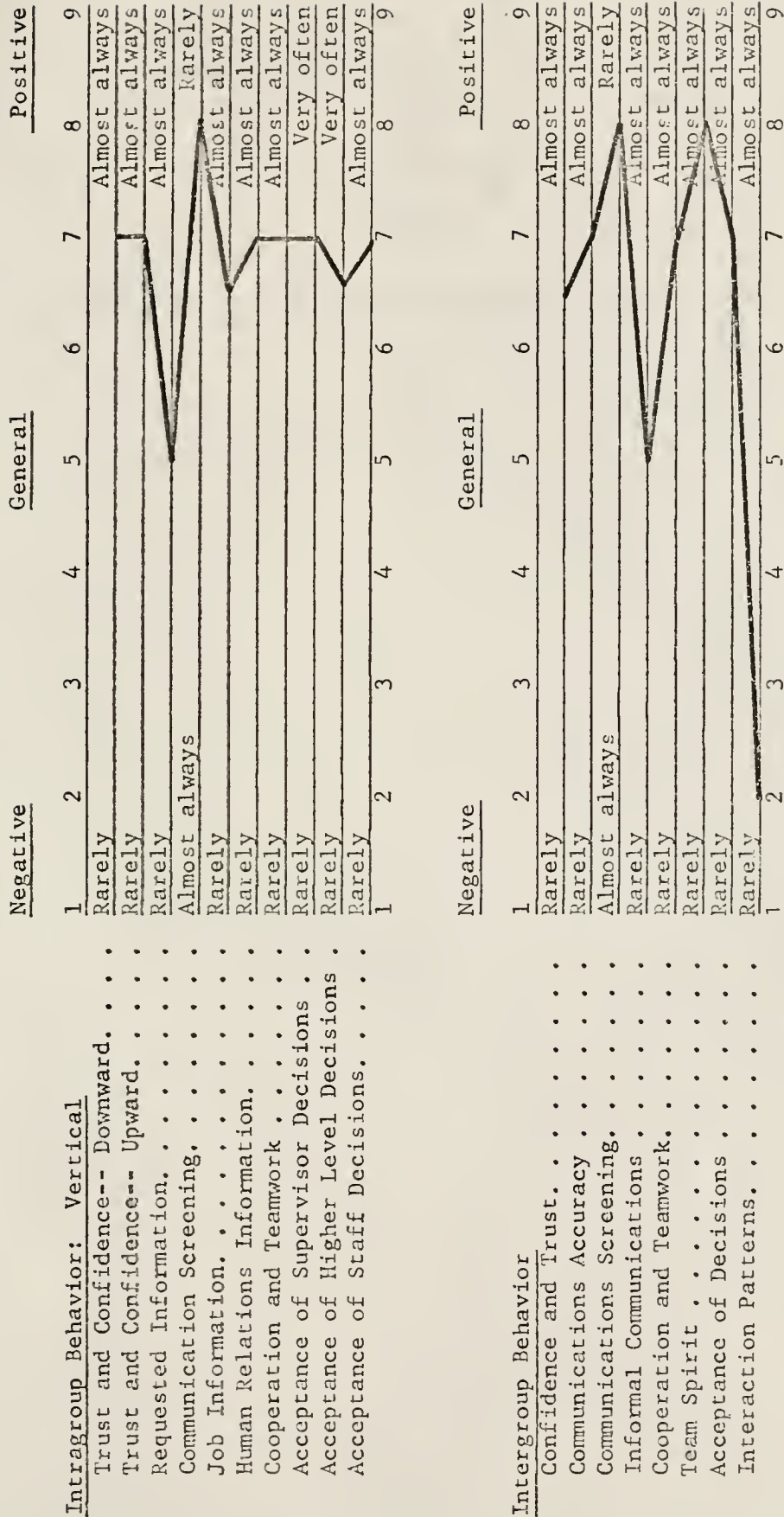


Fig. 82.--Continued

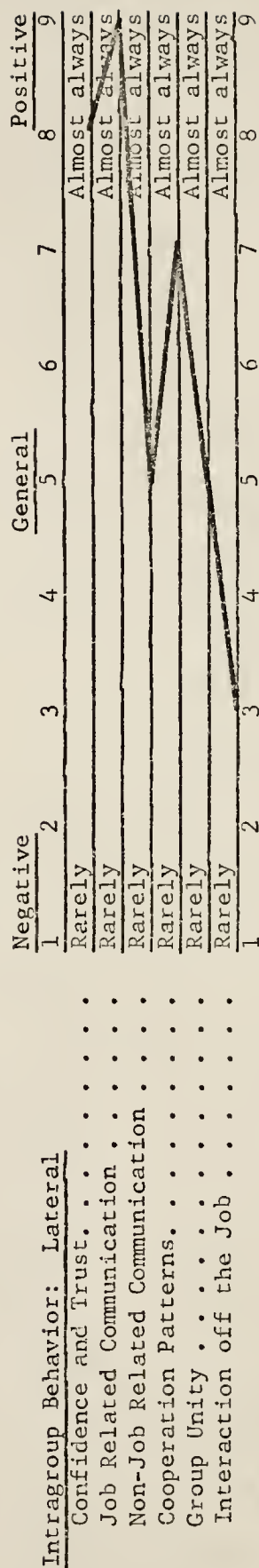
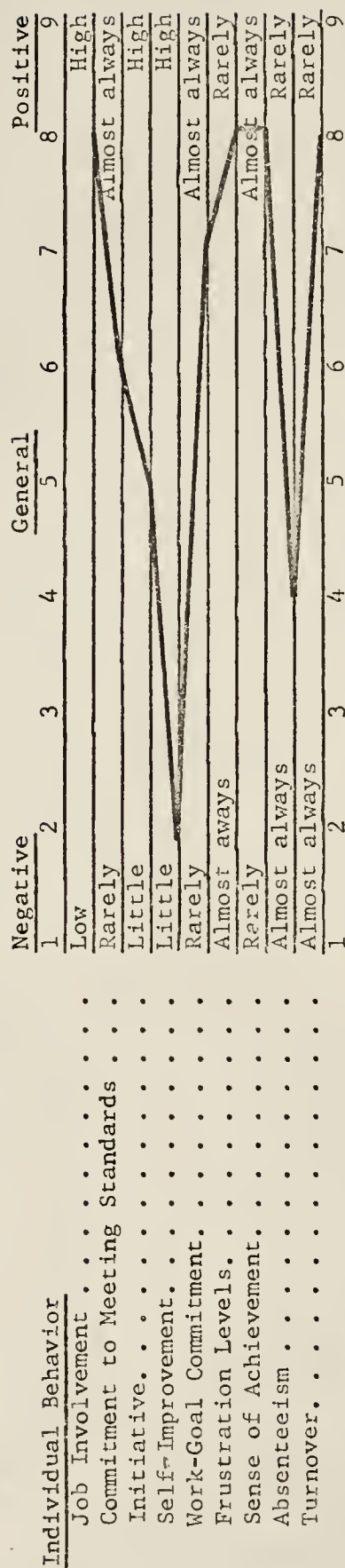


Fig. 83.--Behavioral Profile of Employees, Foremen and Other Salaried Personnel Response, Work Group 7, Plant C.

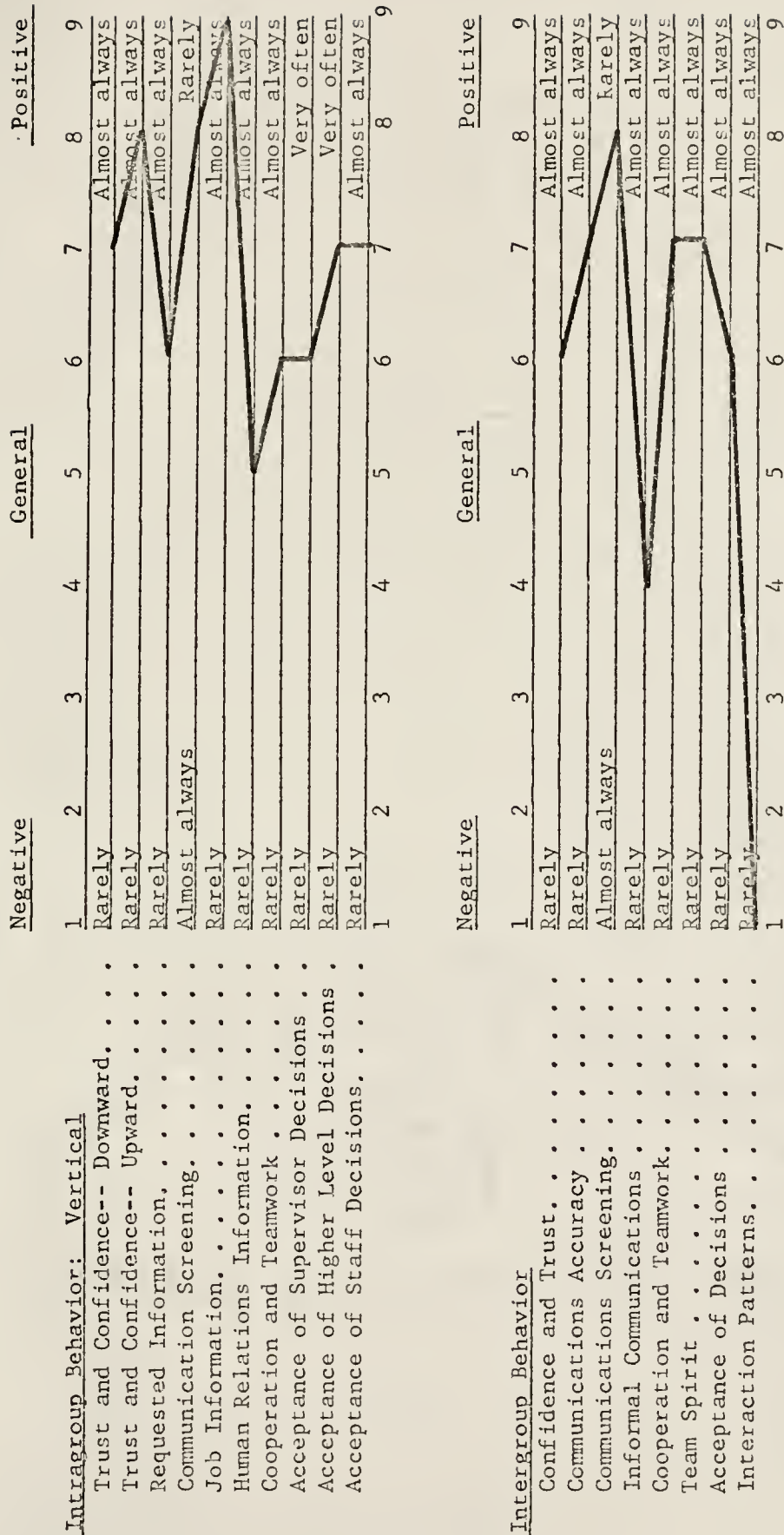


Fig. 83.-- Continued

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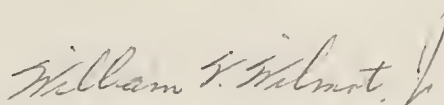
BIOGRAPHICAL SKETCH

Jon English was born October 23, 1933, at Johnstown, Pennsylvania. He attended Richland Twp. High School from which he was graduated in 1952. During the next four years he worked as a department manager for a furniture chain in Pennsylvania. From 1956 to 1958 he served in the United States Army and attained the rank of Specialist Fourth Class. Following his discharge from the Army, he was employed by Ekco, Inc., from 1958 to 1964, serving as President for the last three years.

In April, 1966, he received the degree of Bachelor of Science with a major in Economics from the University of Florida. In April, 1966, he enrolled in the Graduate School of the University of Florida where he received the degree of Master of Business Administration with a major in Management in April, 1967. He entered the doctoral program at the University of Florida the same year. From 1967 to 1968 he served as a research assistant on a NASA research grant. From 1968 to 1969 he was an instructor in the Department of Management. From September, 1969, to the present time Mr. English has been employed as an Assistant Professor teaching Management at the University of South Florida, while he has pursued his work toward the degree of Doctor of Philosophy.

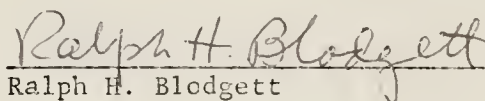
Jon English is married to the former Wanda Marie Kinner; they are parents of two children. Among the organizations of which Mr. English is a member are The Academy of Management, the American Society for Personnel Administration, the Southern Management Association, the American Association of University Professors, Alpha Kappa Psi, and the Personnel Administration Association of Central Florida.

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



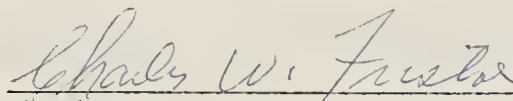
William V. Wilmot, Jr., Chairman
Professor of Management

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



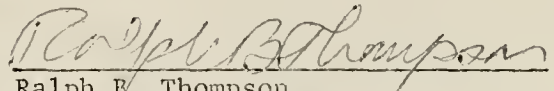
Ralph H. Blodgett
Professor of Economics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Charles W. Fristoe
Associate Professor of Economics

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Philosophy.



Ralph B. Thompson
Professor of Marketing

This dissertation was submitted to the Department of Management in the College of Business Administration and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Philosophy.

August, 1972

Dean, Graduate School



UNIVERSITY OF FLORIDA



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